

WATER REPORTER

Inyo County Water Department

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Pumping Plan Talks Begin

The Los Angeles Department of Water and Power (LADWP) has proposed pumping 93,000 acre-feet of water from April 1, 2000, to March 31, 2001. Although LADWP believes its proposed pumping is conservative, it acknowledges that, due to the below-normal runoff and the level of proposed pumping, water table decline can be expected throughout the Owens Valley.

The Inyo County Water Department has recommended pumping of approximately 63,000 acre-feet. The Water Department believes this program is more consistent with a June 1998 Inyo/Los Angeles Standing Committee directive that:

"...groundwater pumping should continue to be managed in an environmentally conservative manner as has been done under the Drought Recovery Policy. Management under this scenario will provide for continued protection of the environment while the management tools and techniques are being refined."

LADWP officials have commented that groundwater pumping should equal in-valley uses, which are proposed to be about 93,000 acre-feet this year.

The specific areas of disagreement between the County and Los Angeles include

LADWP's proposal to operate wells that are in "off" status under the Inyo/Los Angeles Water Agreement and its proposals for pumping in the Bairs-Georges, Thibaut-Sawmill, Taboose-Aberdeen, and Laws wellfields.

Wells in "OFF" Status

The LADWP proposed plan includes the operation of two wells in the Big Pine wellfield and two wells in the Thibaut-Sawmill wellfield that are in "off" status. Under the Water Agreement, a well in "off" status cannot be pumped unless it has been formally exempted or is to be operated to conduct a study. LADWP says the wells can be operated because there was "no impact on [the] shallow aquifer [during a] 1997-98 pump test." The County believes additional studies are needed before the wells can be operated under a different strategy than the Water Agreement's provisions.

In the Big Pine wellfield, LADWP proposes pumping 25,400 acre-feet in the 2000-2001 runoff year. Inyo County recommends that the two wells in "off" status not be operated, which would reduce pumping in this wellfield to approximately 23,000 acre-feet.

See Pumping Plan, page 3



Saltcedar crew pushes south along Owens River

The "easy" stuff is behind the Inyo County Saltcedar Control Program crew now that the 1999-2000 field season has come to a close. The team averaged an eighth of a mile over the course of a 10 hour day, as the crew of eight people pushed its way south along the Owens River channel an estimated 9 to 10 river miles. Work began in mid-October, east of the Los Angeles Aqueduct Intake, in anticipation of the coming release of water into the channel with the advent of the Lower Owens River Project. As the crew works south it will encounter more water in the channel and that will pose new challenges for another season of sawing, spraying, and stacking slash. Photo by Stephen Ingram.

Preliminary Agreement Reached on Town Water Systems

The transfer of three Owens Valley town water systems, one of the provisions of the Inyo/Los Angeles Water Agreement, has a history that dates as far back as 1934. That's when the city of Los Angeles began acquiring the locally-owned water distribution systems in Laws, Big Pine, Independence, and Lone Pine.

In the 1970s the Los Angeles Depart-

ment of Water and Power (LADWP) announced a plan to install water meters and raise rates. Inyo County filed legal challenges to block the rate hikes, but they were unsuccessful. In 1984, as part of an interim agreement addressing LADWP's groundwater pumping in the Owens Valley, rates were reduced to one-half of 1983 rates. When negotiations ensued for what was to

become the Water Agreement, LADWP again threatened a skyrocketing rate hike unless ownership of the systems was transferred from LADWP to local control.

The County negotiated a compromise in which the transfer of the water systems in Laws, Independence, and Lone Pine would occur over a five-year time period. The Big Pine Community Services District had already leased that water system from LADWP and is working independently with LADWP to transfer the system to the CSD.

During the five-year period, Los Angeles would make upgrades and repairs to the three systems. Once ownership of the systems was transferred, Los Angeles would continue operate and maintain the supply wells and provide predetermined amounts of water to each system at no cost.

Since the Water Agreement was finalized, the firm of Boyle Engineering was retained to assess and report on the condition of the three systems and recommend upgrades. However, the County and LADWP were at odds over the report's conclusions. LADWP found the report adequate the County found it deficient.

In March the Inyo/Los Angeles Standing Committee directed staff to resolve their differences and bring back a recommendation. In early May a proposal setting several principles of agreement was released by LADWP and the County.

In the coming days, staff from LADWP and Inyo County will craft an agreement to take to the Inyo County Board of Supervisors and the Los Angeles Board of Water

See Water Systems, page 3

Owens Lake Evaluation Nears Completion

Nearly two years ago, the Los Angeles Department of Water and Power (LADWP) proposed pumping groundwater from the Owens Lake area to supply some of the water needed for dust control measures at the lake. Now, consultants have nearly completed the "Owens Lake Groundwater Evaluation" (OLGE). Their conclusions will be presented to the public at a workshop on June 21, 2000, in Lone Pine.

As the OLGE nears its close, Jerry Gewe, LADWP Assistant General Manager, said the department plans to set aside the search for groundwater at Owens Lake for the next year or two.

LADWP's proposal was twofold. First, the Department proposed initiating short-term pumping as early as 1999 to supply a one-square-mile dust control

prototype project. Second, LADWP wanted to pump groundwater over the long term to help supply the more than 10 square miles of dust control measures that it must install on the lake in the coming years.

Any pumping at Owens Lake must be done in accordance with the environmental protections of the Inyo/Los Angeles Water Agreement. To assist in evaluating the LADWP proposal, Inyo County and LADWP jointly selected the firm of Camp Dresser & McKee (CDM). The consultants were given three tasks: (1) solicit input from the public regarding the environmental criteria by which groundwater pumping should be managed, (2) evaluate LADWP's proposal

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Inyo/LA Cooperative Studies Get Underway

Dr. Aaron Steinwand, Inyo County Water Department Soil Scientist, explained that a decade has passed since the techniques for groundwater management were developed for the Inyo/Los Angeles Water Agreement and its technical manual, the Green Book. "It was a good first cut," he said, "but there is one critical thing that is missing from the management provisions and that one thing is consideration of the depth-to-water."

According to Steinwand, depth-to-water drives the conditions of vegetation more than any other single factor, but it is not considered under the Green Book methods for determining whether a pump operates. That's why many of the cooperative studies to be conducted by the Inyo County Water Department and the Los Angeles Department of Water and Power (LADWP) speak to that missing piece of information.

Current methods for managing LADWP's pumping in the Owens Valley are based on measurements of soil water in the plants' rooting zones. Even when water tables are disconnected from the rooting zone, soil will hold moisture for some time before the water supply is depleted by the plants. According to Steinwand, there is a lag time between when the pumping stops and the water table rises sufficiently to replenish the soil water. If pumps are operated as the soil moisture slowly runs out, it takes longer for the water table to recover.

The water table can take years to come back, Steinwand said. But with a better understanding, the Water Department believes it can predict when pumping should be stopped and water tables allowed to recover before soil moisture is exhausted and vegetation is stressed.

Asked what LADWP hopes to get out of the cooperative studies, Clarence Martin, LADWP Real Estate and Resource Manager, said LADWP is interested in improving the measurement and quantification of evapotranspiration (a combination of evaporation from soil and water use by plants).

Martin said how the studies will be used is something LADWP needs to decide. "The reason we're hesitant is that we feel the Inyo County Water Department wants to make depth-to-water a criteria [for pumping operations].

[LADWP] agreed to the alternative in the EIR that required more mitigation because we would be able to pump without depth-to-water requirements," Martin said.

The Water Agreement contains provisions to change the methods of managing LADWP's groundwater pumping, based on information gained from ongoing research or cooperative studies.

One important area of study to be addressed in the cooperative studies program involves developing better hydrologic modeling tools that can be used to evaluate the impact on groundwater levels from pumping, climatic variations, surface water management, and other hydrologic changes. When completed models could be used to evaluate different groundwater management strategies.

In regard to vegetation, Dr. Sally Manning, Vegetation Scientist for the Water Department, said the studies will be taking a step forward in terms of the complexity of the analysis of vegetation change. Past practices of measuring perennial cover at given locations in the field and making year-to-year comparisons reveal extremes, but do not show the more subtle changes. The study will use existing data to try to better understand the relationship between environmental variables and vegetation change, the rates of change, and the predisposing conditions that are likely to result in significant long-term adverse changes.

Vegetation studies will incorporate factors such as the depth-to-water, the time the water table has been removed from plant root zones, the amount of precipitation, the soil characteristics, and the starting composition (whether the area was originally meadow, weed-dominated, scrub, etc.) to explore trends that are occurring and determine their causes.

The Water Department views the studies as important tool-development activities to improve the management of groundwater pumping. According to Manning, the models that will be generated will reflect the current understanding of the processes at work in the Owens Valley environment. The exercise of developing and applying the models may reveal where that understanding is adequate or where additional data are needed.

Cooperative studies at a glance

Development of Hydrological Modeling Tools—Pending Standing Committee approval	Improves current hydrological modeling tools used to predict the impact of groundwater pumping on the water table.
Development of a Model for Predicting Plant Water Use and Soil Water Replenishment — Pending Standing Committee approval	Combines plant water use, groundwater, precipitation, and soil water information into a model to predict soil water conditions.
ET From Groundwater Dependent Plant Communities: Comparison of Micrometeorological & Vegetation-based Measurements—Approved	Compares the Green Book methods of determining plant water requirements with independent measurements.
Characterization of Confining Layer Hydrologic Conductivity and Storage Properties—Approved	Determines the rate water passes through clay layers between aquifers to better manage pumping from deep confined aquifers.
Shallow and Deep Groundwater Geochemistry and the Source of Spring and Seep Water—Pending Standing Committee approval	Compares water chemistry from shallow and deep wells to chemistry of seeps and springs to identify source waters and determine potential effects of pumping on these areas.
Application of Canonical Community Ordination to Assess Vegetation Change—Approved	Applies complex statistical techniques to existing data to determine how much water table fluctuation and other environmental factors affect vegetation over the long-term.
Inventory and Classification of Riparian Vegetation in the Owens Valley—Approved	Assesses and maps riparian vegetation on LADWP land in the Owens Valley to improve monitoring and management of riparian areas.
Development of a Demographic Model for Nevada Saltbush—Approved	Detects advance-warning indicators of gradual change of one type of vegetation to another and projects trends for the future under different scenarios.
Development of a Plant Community Dynamics Model for Valley Vegetation—Proposal to be developed at a later date	Draws the information from the other studies into a model predicting how plant communities will respond to different groundwater management scenarios.

From the Commission:

This is a new (and I am sure long-awaited) "feature" of the *Water Reporter*. It is an attempt to make the Inyo County Water Commission more responsive and accessible to you, the public, by reporting on Commission activities or specific Commissioner areas of interest.

Within the last three years, four Commissioners including Bob Campbell, and long-time members Scott Kemp, Ray Gray and Harry Holgate, have resigned or retired. They along with others, including current Commissioner David Miller, guided the Inyo County Water Department through the important efforts of developing the Inyo/Los Angeles Water Agreement, overseeing the implementation of pumping programs, developing mitigation measures, and developing the MOU, which allowed the Water Agreement to be implemented. Our thanks go out to everyone who worked hard on those issues.

We have a relatively new Commission make up (with the exception of David Miller), which for the first time has a majority of women members. There has been a geographical shift too, in that a majority of the Commissioners live from Lone Pine south. In order of time on the Commission, membership is now David Miller, Teri Cawelti, Paul Lamos (previously a member for nine years), Anna Zacher, and Judy Fowler.

The Commission has recently reviewed its role (especially in respect to Inyo County Resolution 99-43) and has made a few changes that are intended to assure we are fulfilling the role the Board of Supervisors envisions for the Commission. Some of these changes include how meetings are agendaized, scheduled (or unscheduled), how reports are made to the Board of Supervisors, more frequent Commission meetings and more frequent *Water Reporter* issues. The Commission is also reaching out to the public by asking for attendance at meetings and encouraging contact with individual Commissioners (c/o Inyo County Water Department).

The Commission is now, or will be, busy overseeing the implementation of the Water Agreement and MOU which includes the Lower Owens River Project, water exportation projects relative to Ordinance 1004, Owens Lake groundwater pumping, and being active on the Standing Committee. Thankfully, the very able staff of the Inyo County Water Department faithfully serves the Water Commission and Inyo County.

Please do not hesitate to contact the Water Department or one of your Commissioners if you have a comment or concern.

Sincerely,
Paul Lamos,
Chairman

OWENS VALLEY

Water Reporter

Produced by the Inyo County Water Department in Bishop, California, and distributed in the Inyo Register.

The ICWD was formed in 1980. Its mission is to monitor the Owens Valley environment to protect the valley's water resources, conduct research, and educate the public on Inyo County water issues.

The purpose of this newsletter is to provide information on ICWD activities and Owens Valley water issues, and on other Inyo County and Eastern Sierra water issues.

Department Director: Greg James
Produced by Leah Kirk

If you have comments on the newsletter or would like to be put on the mailing list, write:

Inyo County Water Department, 163 May Street, Bishop, California 93514.
Or call: (619) 872-1168.

Water System, from front page

and Power Commissioners for their consideration.

The decision to proceed with an agreement was made at the May 11 meeting of the Standing Committee. Inyo County's representatives on the Committee acknowledged concerns raised by members of the community regarding the proposal. They encouraged citizens to review the specifics of the proposal and participate in the discussion that will take place when a final agreement goes before the Board of Supervisors for a decision. The agreement will include the following principles:

\$2.5 million for upgrades

LADWP will pay Inyo County \$2.5 million in three equal installments to cover the cost of modifications and improvements to the Independence, Laws, and Lone Pine water systems. The first payment will be made within 60 days of the formal approval of the agreement by both County and LADWP governing boards. The second payment will be made by the end of June 2001, and the final payment by the end of June 2002.

According to Rene Mendez, Inyo County Administrator, payments will not be tied to a timetable for repairs and construction. The County will set the priorities for which modifications and improvements are made first.

Costs that the County owes LADWP and that LADWP owes the County will be factored into the first payment. Inyo County has a financial obligation to LADWP for the operation and maintenance of the distribution systems from September 1, 1993, to June 30, 1999. LADWP owes the County for water bills from April 1999 to February 2000.

Mendez said the proposal does not include any decisions about how payments might be made to a Community Service District. The county administrator said that, should a community come forward and establish a community service district, a variety of payment options would be developed and presented to the Inyo County Board of Supervisors.

Jeff Jewett, Inyo County Public Works Director, told Inyo County Supervisors he has estimated the repairs needed

to bring the systems up to an acceptable level of operation and in compliance with applicable standards. The repairs include larger pipes, more fire hydrants, and fire flow deliveries up to or greater than 1,000 gallons per minute. Jewett said he developed the estimate by starting with "everything in the Boyle report" and then adding to it. Jewett's estimate includes the replacement of the entire supply system for Laws. For Lone Pine and Independence, the estimate includes replacement of mains, completing looping in the systems, increasing flows to hydrants, installing water mains and hydrants, and replacing problem lines with a zero life expectancy.

\$80,000 for additional improvements and surveys

LADWP will pay the County \$30,000 to cover improvements or replacement of the chlorination feed and control systems for all three water systems. A \$50,000 payment will be made to the County to perform cross connection surveys for the three town systems—where systems are vulnerable to contamination.

Mendez and Jewett said, by managing and performing the work, the County will gain familiarity with the equipment and learn about the systems.

Consistency with the Water Agreement

Paul Bruce, Inyo County Counsel, told Inyo County Supervisors that payment to the County for necessary repairs to the town water systems would not constitute a change to the Water Agreement. According to Bruce, under the Water Agreement, LADWP may contract to have the improvements and repairs made. Payment to Inyo County to perform the work would constitute such an arrangement and would not require amending the Water Agreement.

The timetables identified in the Water Agreement will not be altered by the agreement on the water systems.

LADWP will continue to operate two reservoirs and supply treated water prior to the transfer of the systems. The County will be responsible for water treatment after the transfer of ownership. The County will continue to perform water system operation and maintenance.

Inyo County recommends pumping 14,000 acre-feet in the 2000-2001 runoff year to supply the Black Rock Fish Hatchery.

Taboose-Aberdeen Wellfield

The LADWP proposal for groundwater pumping from this wellfield, located between the Blackrock Rest Area and Tinemaha Reservoir, includes full operation of wells 349 and 118. The County believes that the operation of well 349 should be restricted to the level needed to supply a pond downstream of the well. The County has previously requested installation of three monitoring wells in the vicinity of well 349 in order to monitor groundwater levels near the well. In June 1999, LADWP indicated the County's request would be considered but no monitoring wells have been installed to date.

As a result of low runoff combined with LADWP's pumping in this wellfield last year of nearly 10,000 acre-feet, groundwater levels dropped about 2-3 feet at three test wells located approximately 1 mile from well 349. Greater declines probably occurred closer to the well. A similar amount of drawdown would be expected this year since runoff and LADWP's proposed pumping of 11,830 acre-feet are similar to 1999-2000.

The County believes that the combined water table decline from two years of high pumping and low runoff could impact the vegetation in the area and instead recommends pumping 3,000 acre-feet in the 2000-2001 runoff year.

Laws Wellfield

Groundwater pumping in this wellfield from 1987 to 1993 caused vegetation to decline below baseline conditions, and it has not recovered in some areas. In the 1998-1999 runoff year, when groundwater pumping was low and the McNally canals carried water from the Owens River through the Laws area, the water table rose significantly. In the 1999-2000 runoff year, when pumping was low but the McNally canals were not operated, the water table dropped.

After the transfer, LADWP will deliver at no cost up to 450 acre-feet of water per year to Independence, 50 acre-feet per year to Laws, and 550 acre-feet to Lone Pine. LADWP will supply additional water as needed but will be paid for the added production costs. A formula to calculate the additional costs will be provided to the County.

Improvements to the Independence Reservoir

LADWP will make the improvements to the Independence reservoir recommended in the Boyle report, including replacing the cover and buttressing the reservoir.

In addition, per the Water Agreement, LADWP will repair any damage to the Independence reservoir caused by an earthquake during the 15-year period following June 13, 2002.

Water Supply Wells

LADWP will pay for drilling and equipping a back-up town water system supply well for Lone Pine and a new town water supply well for Laws.

When a town water supply well is replaced, the new well will be located as close to the old well as possible. In the event the well has to be installed at a different location, LADWP will plumb the well to within 500 feet of the town water system. The County or another local entity, if established, will be responsible for any connection to the town supply within 500 feet. LADWP will own and maintain the well, pump, electric motor, and flow meter; the County will own the discharge line.

LADWP will provide at no cost the necessary easements for existing facilities and any easements necessary to supply water from new wells.

LADWP will deliver water at the town wells at pressure adequate to reach the Lone Pine and Independence reservoirs, and will provide water between 40 and 70 psi at ground level at the Laws town well. The County or the local entity will be responsible for delivery of water from the wells.

LADWP proposes to pump 7,290 acre-feet in the 2000-2001 runoff year and does not propose to operate the canals.

The County believes this will cause the water table and vegetation to decline. Inyo County recommends no pumping and the operation of the McNally canals to promote water table and vegetation recovery and to supply irrigation requirements in the Laws area.

In the four remaining Owens Valley wellfields, the County agrees with LADWP's proposals.

Inyo County and LADWP will be discussing the pumping program in the coming weeks before returning to the Standing Committee on June 16 with either a recommended Owens Valley pumping plan for 2000-2001 or a list of areas of disagreement. A comparison of LADWP's proposals and Inyo County's recommendations for pumping are shown below.

Wellfield	LADWP proposes (acre-feet)	Inyo County recommends (acre-feet)
Lone Pine	1,300	1,300
Bairs-Georges	4,920	500
Symmes-Shepherd	1,430	1,430
Independence-Oak	8,440	8,440
Thibaut-Sawmill	20,640	14,000
Taboose-Aberdeen	11,830	3,000
Big Pine	25,400	23,000
Bishop	11,750	11,750
Laws	7,290	0
TOTALS	93,000	63,420

Pumping Plan, from front page

The pumping would be from exempt wells that supply the Fish Springs Fish Hatchery.

Bairs-Georges Wellfield

Computer modeling suggests that LADWP's proposed pumping will lower water levels in this wellfield, which is located between the north end of the Alabama Hills and Manzanar. Additionally, the models predict water tables are not likely to recover to baseline levels during the 2001-2002 runoff year, even if pumping is halted next year and it is a normal runoff year. Also, vegetation in the wellfield has previously declined as a result of groundwater pumping during drought conditions and one of the parcels that would be affected by the 2000-2001 plan has not recovered to baseline conditions. The County believes LADWP's proposed pumping in the Bairs-Georges wellfield of 4,920 acre-feet is inconsistent with the Drought Recovery Policy and the conservative management approach directed by the Standing Committee and that it would conflict with the vegetation goals of the Water Agreement.

Inyo County recommends pumping 500 acre-feet in the 2000-2001 runoff year for irrigation purposes should Georges Creek flows fall significantly.

Thibaut-Sawmill Wellfield

Computer modeling predicts the LADWP proposal to pump 20,640 acre-feet from this wellfield, located from the north end of Fort Independence Indian Reservation to Sawmill Creek, will lower the water table. Water levels are unlikely to recover next year even if it is a normal runoff year and groundwater pumping is limited to the amount necessary to supply the Black Rock Fish Hatchery. In addition, some vegetation in the wellfield is below the baseline level and under the proposed pumping plan the plant cover could decline further, which is inconsistent with the Standing Committee's directive and the Water Agreement.

Big Pine Ditch Water Supply Options Proposed

The Los Angeles Department of Water and Power (LADWP) has proposed using a combination of surface and well water to supply up to 6 cubic feet per second (cfs) of water to the Big Pine Ditch System. The recommendation is contained in a LADWP report released in late April, the latest development in a project to repair and expand the system of ditches in the town of Big Pine. The project is a part of the Inyo/Los Angeles Water Agreement.

Under the provisions of the Water Agreement, LADWP will provide up to 6 cfs of water to supply the ditch system and up to \$100,000 to Big Pine to rebuild the system. The Inyo/Los Angeles Standing Committee established a 3-step process for the project to proceed. In September 1999, the Big Pine Irrigation and Improvement Association completed the first step by providing maps, ditch routes, costs, elevations, and right-of-way documentation from Big Pine property owners.

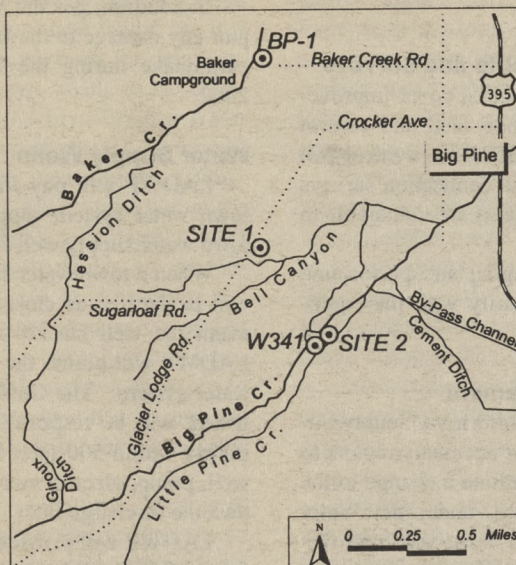
As part of the second step, LADWP was to evaluate water sources for the project. LADWP's report describes four alternatives to either directly supply water to the ditch system or replace surface water supplied to the system. The report identifies three potential sites for new wells.

The first of LADWP's alternatives calls for drilling a new well at Site 1 (shown on the map accompanying this article), and reducing or discontinuing diversions to the Cement Ditch to make up for any short-fall in flows in Big Pine Creek. This ditch diverts water from Big Pine Creek to irrigate agricultural land south of Big Pine that is leased from LADWP. The new well would be the primary source for the 6 cfs of water supplied to the ditch system.

The second alternative involves drilling a more efficient,

larger-capacity well at Site 2 to replace the town supply well (well 341) and reducing or discontinuing flows to the Cement Ditch to make up for any shortages in Big Pine Creek.

Alternative three calls for drilling a well on Baker Creek at the BP1 Site with the same provisions for making up for a short-fall as in alternatives one and two. Possible diversions from Giroux Ditch are also included. Water pumped from the new well at Baker Creek would replace to the Los Angeles Aqueduct system the water diverted from Big Pine Creek.



The fourth alternative calls for drilling a new well at BP1, drilling a replacement well for the town well at Site 2, and reducing or discontinuing diversions to the Cement Ditch as needed. The report states that alternative four, LADWP's preferred alternative, provides the most flexibility in supplying the "up to 6 cfs flow."

Finally, the report concludes that while constructing two new wells will be more costly, "it will provide flexibility, at all times provide an adequate water [supply] for the 'improved' ditch system, will cause minimal disruption to the LADWP lessee, and

will provide LA with rotational pumping flexibility."

The Inyo County Water Department is evaluating the LADWP report. The siting and operation of any well must be consistent with the provisions of the Water Agreement regarding new wells. Once the evaluation is completed and the choice is finalized, Inyo County and LADWP will address the environmental requirements.

The final step of the process will be when the project is funded and the Big Pine Irrigation and Improvement Association repairs and expands the system in preparation for flows.

Owens Lake, from front page

for short-term pumping for the prototype project, and (3) prepare a work plan to evaluate long-term pumping from the lake.

CDM held workshops with interested citizens ("stakeholders") finding in general that they wanted no change in water quantity or quality at supply wells, no damage to structures through land subsidence, no adverse changes to vegetation, and no loss of wildlife habitat. Paul Brown, senior vice president of CDM said the public forums were not intended to average the different views, but rather preserve the full range of concerns and issues. From that public dialog came the stakeholders' recommendations for objectives and standards by which to evaluate LADWP's proposal to pump groundwater at Owens Lake.

To evaluate the environmental consequences of pumping to supply the prototype project, CDM modified a groundwater model developed by the Desert Research Institute of Reno, Nevada, for the Great Basin Unified Air Pollution Control District (APCD).

The groundwater model was used to predict impacts to seep and spring flows and vegetation around the perimeter of the lake. However, the model underpredicted the amount of groundwater drawdown when compared to actual drawdown that occurred when APCD ran a well test near the Owens River Delta last year. In September 1999, LADWP officials announced that they would not pursue the prototype project and that no short-term groundwater pumping would be needed. LADWP's Gewe said, "when we proposed using local groundwater for the prototype project we made a commitment to pump in an environmentally responsible manner." He added LADWP continues to believe long-term pumping could be conducted in an environmentally responsible manner and could be a source of water for an overall dust control program.

In regard to long-term pumping, CDM developed a work plan for future research and monitoring. CDM recommended a program of studies in three broad areas: (1) the physical characteristics of the lake that affect the flow, storage, and quality of groundwater; (2) the quantities of water that enter and leave the basin; and (3) the relationship between the groundwater basin and other environmental factors—whether natural or man made (native vegetation, wetlands, springs, private wells, etc.).

Some of the questions that CDM's work plan addresses:

- Will deep groundwater pumping affect discharge from springs and seeps and open water habitat?
- Do faults at Owens Lake serve as conduits or barriers to horizontal and vertical groundwater movement?
- How much recharge to the Owens Lake area is from subsurface flow from the north, from adjacent upland mountain areas, or from other sources of recharge?
- What is the effect on wetland vegetation of changing the timing or magnitude of shallow water levels?

In conjunction with the scientific research, the work plan recommends a data collection program to include flow monitoring, collecting precipitation and climatic data, water level monitoring, soil moisture monitoring, water quality sampling, and vegetation and wetland monitoring.

Overall, the Inyo County Water Department hydrology staff said the work plan reflects an extensive program. LADWP executive Gewe said that such an undertaking demands a good deal of manpower. With the Lower Owens River Project and the first phase of dust control measures on Owens Lake already requiring the staff's time and attention, Gewe said there isn't enough manpower to pursue the long-term groundwater pumping proposal for at least the next year or two. In the meantime, water to supply LADWP's dust control measures on Owens Lake will be diverted from Los Angeles' aqueduct.

News briefs

Standing Committee Tours Laws Ranch

The Inyo/Los Angeles Standing Committee toured the Laws area on May 11 to get a first-hand look at the "Laws Ranch" and some of the water management and vegetation concerns in the area. Because of litigation between the Los Angeles Department of Water and Power (LADWP) and its ranch lessee, which started in the mid-1990s, land that is required to be irrigated under the Inyo/Los Angeles Water Agreement was taken out of irrigation. LADWP has proposed a plan for reestablishing irrigation on the ranch.

However, LADWP believes it would be impractical and inefficient to reestablish irrigation on approximately 200 acres because of the soil properties, topography, and distance from water sources. LADWP proposes to irrigate an equivalent amount of land elsewhere in the Laws area. In addition, LADWP believes that approximately 275 acres in the Laws area were incorrectly designated as Type E (irrigated) on the Water Agreement's baseline vegetation maps. Under the LADWP plan, around 350 acres would be permanently taken out of irrigation and revegetated with native plants.

Inyo County has expressed support for resuming irrigation at the Laws Ranch, but believes that the long-term the source of water supply—how much of the irrigation water will be supplied by pumping groundwater and how much will be diverted from the Owens River through the McNally canals—needs to be assessed before agreement can be reached on the proposal. The Water Department believes there is a risk that supplying the irrigation needs of the ranch with groundwater may affect nearby native groundwater-dependent meadow vegetation, unless one or both of the McNally canals are operated as needed to provide groundwater recharge.

Indian Wells Valley Eyes Olancho Water

Officials responsible for supplying water to Ridgecrest and Inyokern recently made a fact-finding trip to Inyo County to learn about the Western Water Company's proposed Olancho groundwater export project. As the publicly-traded Western Water Company looks to sell the project, the Indian Wells Valley Water District is emerging as the most visible prospective buyer.

In early April, Arden Wallum, General Manager of the Indian Wells Valley Water District, wrote a letter to Michael Dorame, Chairman of the Inyo County Board of Supervisors saying that Western Water had approached the agency about purchasing the project.

"We have met with a representative on one occasion and informed Western Water that our next step would be to contact you regarding your assessment of this project," Wallum wrote.

As proposed in 1998, the Olancho project involves buying 2,100 acres of land, drilling six to eight wells on the property, and constructing and operating a water supply pipeline to the Los Angeles Aqueduct. Western Water proposed selling 6,000 to 8,000 acre-feet of groundwater per year to the city of Los Angeles. The project was a catalyst for an agreement of the Inyo/Los Angeles Standing Committee that no water would be purchased by the Los Angeles Department of Water and Power from sellers in Inyo County unless there was an agreement in place with the County ensuring protection of the County's environment and economy. In November 1998, the County enacted a new groundwater ordinance adding protection for the County from groundwater transports and transfers.

Asked recently about the water district's position regarding the Olancho project, Wallum said, "we are a little overwhelmed with the work left on the project. Whether it is a viable project is still a question. There has been no decision. I have our attorney and engineer looking at it. There are huge stacks of work that have been done. But there is a lot of work to even get to a point to know if we want to get into a project like this one."

Water Reporter

Inyo County Water Department

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Owens Lake groundwater evaluation involves public

A public process has commenced to evaluate the Los Angeles Department of Water and Power's (LADWP) proposal to pump groundwater from Owens Lake to use as one source of water for dust control on the lake. With funding from LADWP, Inyo County has retained the firm of Camp Dresser & McKee (CDM) to conduct the study, known as the Owens Lake Groundwater Evaluation, and to facilitate the public involvement process.

Working closely with the public, the county, LADWP, and other agencies, CDM will: 1) solicit the public's and others' views regarding environmental standards that would govern any pumping by LADWP at Owens Lake; 2) evaluate the potential environmental consequences of LADWP's proposed pumping; and 3) develop a work plan for future studies, data collection and monitoring.

Jerry Gewe, LADWP's director of water resources, said LADWP wants to use groundwater at Owens Lake for a number of reasons: it's cheaper than other sources, it could mean an earlier start to dust control, and it is the best use of the water, which is thought to be

nonpotable.

"We believe it's appropriate, in accordance with the state constitution, to use the pristine snowmelt water from the aqueduct for human consumption, and to use the non-potable water from under the lake for dust control," Gewe said. "I want to use as much groundwater as I can responsibly utilize on the lake." But Gewe said cost is the number one reason. "I can pay MWD \$431 per acre-foot, or I can pump groundwater on Owens Lake at a cost of \$100-150 per acre-foot."

According to Greg James, Inyo County Water Department Director, the evaluation of pumping at Owens Lake differs from past practices in that the process is open to the public from the very beginning.

"When the Inyo/L.A. long-term water management agreement was developed, it was fashioned as a settlement of litigation with Los Angeles," James said. "Although the County and Los Angeles adopted the agreement in 1991, it took five more years of

See Owens Lake, page 2



Sawyer, swamper, sprayer — Saltcedar crew members each get a chance at cutting the limbs, pulling them aside, and treating the stumps. Resting, left to right: Bruce Klein, Rick Puskar, Chuck Sprester, Bryan Taylor. Not pictured: Brian Cashore, saltcedar program manager.

Photo by Leah Kirk

Pumping application ushers in new era of groundwater regulation

Inyo County received its first application under its new groundwater transfer ordinance when Western Water Company filed in early December for a conditional use permit to pump groundwater and sell it to the City of Los Angeles.

Western Water Company's application states that it proposes to pump between

6,000 and 8,000 acre-feet of water yearly from an area south of Olancha in southern Inyo County, and transfer it to Los Angeles' aqueduct for transport to Los Angeles. The proposed project will undergo the extensive review process by the County and the public that is set out in the new ordinance. (See "Details of Inyo's new groundwater ordi-

nance," page 3.)

The ordinance requires that a conditional use permit be obtained from the Inyo County Planning Department for any project involving a transfer or transport of groundwater from Inyo County groundwater basins or the sale of surface water or groundwater to the City of Los Angeles. It also applies to certain transfers of surface water, and to bottled water truck transfers if they exceed one acre-foot.

Greg James, director of the Inyo County Water Department, said Western Water's proposed water transfer, as the first project to be subject to the rules of the new ordinance, marks the beginning of yet another chapter in Inyo County's long water history. He said the ordinance itself "is a logical next step in the county's efforts to

protect its water resources."

"The new ordinance continues a pattern of response by the county to proposals or threats of water exports," James said. "The county is in the groundwater regulation business because the Board of Supervisors believes that regulation is necessary to protect the health of the valley environment and the county's citizens, and because new proposals to exploit the county's water resources continue to surface."

History

County voters began groundwater regulation in 1980, when they passed the County's first groundwater ordinance. That ordinance, which applied only to the Owens Valley, was drafted by the County in re-

See Regulation, page 3

Western Water Company proposes to pump groundwater in Inyo County to sell to Los Angeles

Western Water Company of Victorville, Calif., has applied to pump groundwater in southern Inyo County and sell it to the Los Angeles Department of Water and Power (LADWP). The application, filed in early December with the Inyo County Planning Department, is for a conditional use permit to construct and operate the water transfer project under the regulations of the County's new groundwater ordinance.

The proposed project is south of Owens Lake and Highway 190, and east of U.S. 395. It involves the purchase of four properties, with accompanying water rights, which total 1,832 acres. The land purchases are being negotiated by the company and the property owners.

According to the application, the Olancha Water Development Project would involve drilling and operating six to eight agricultural water supply wells on the purchased property, constructing and operating about 34,500 feet of water-supply pipeline, establishing a connection to the L.A. Aqueduct at Haiwee Reservoir, and supplying 6,000 to 8,000 acre-feet of water per year to LADWP.

The project would be constructed in two phases: one, the construction of the wells and pipeline to deliver the water south to the aqueduct; and two, the potential construction of a pipeline segment from the northernmost well to Highway 190, for LADWP to then pipe to Owens Lake for use in dust control.

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Owens Lake, from front page

negotiations with the state and environmental groups before additional litigation over the environmental impact report (EIR) associated with the agreement was resolved. The nature of the litigation kept discussions behind closed doors."

James said that, because the litigation is now over, Inyo County and LADWP opened the process so, from the beginning, the public could present their views on the evaluation and on the development of the rules that will govern any pumping at Owens Lake.

The public evaluation is taking place through a number of stakeholder workshops. The stakeholders — people and agencies who have expressed interest in LADWP's proposal — already have met with CDM in one of five planned workshops for the Owens Lake Groundwater Evaluation. The second workshop is Jan. 19.

The goals for the process are to:

- ♦ develop a common understanding of the groundwater under Owens Lake;
- ♦ communicate to decision makers the community's views regarding environmental standards that should be used to manage groundwater pumping;
- ♦ apply the understanding of Owens Lake groundwater to evaluate the impacts of proposed pumping according to established environmental standards;
- ♦ provide decision-makers with the knowledge needed to assess the likely effects of using groundwater from under the lake for dust control, now and in the future;
- ♦ strive to achieve stakeholder agreement that all concerns have been thoroughly documented, credibly researched, forthrightly addressed, and well communicated to decision makers.

The process began with a public meeting where interested individuals from the community were invited to participate. In October, CDM, Inyo County and LADWP conducted the first of five planned workshops. CDM has documented the stakeholders' concerns, expressed at the workshop and in interviews. General concerns so far involve the potential for impacts on: water quality and water levels at non-LADWP wells; groundwater dependent vegetation and wetlands; land subsidence; aesthetics and area economics; and dust mitigation measures.

Paul Brown, senior vice president of CDM and the chief facilitator, said CDM wants to preserve the individuality and diversity of views throughout the process.

"It's not uncommon to have groups of people come together and make decisions," he said. "But, frequently, their views are 'averaged' in the process. We've tried to

keep views distinct, in order to understand what each stakeholder thinks. I think there will be room in this work plan to accommodate all of their views. This is a community that has seen significant consequences from water export."

Next workshop Jan. 19

The second workshop of the Owens Lake Groundwater Evaluation will be Jan. 19 from 6 p.m. to 9:30 p.m. at Statham Hall in Lone Pine.

Following an introduction, Jerry Gewe of LADWP will discuss Los Angeles' proposal to pump groundwater from beneath Owens Lake. The agenda also includes a review of stakeholder concerns, a discussion of preliminary groundwater management objectives, and an update on technical data.

Paul Brown, of Camp Dresser & McKee Inc., will facilitate. For more information contact the Inyo County Water Department: (760) 872-1168; inyowaterdept@telis.org.

CDM is gathering existing data about Owens Lake to examine together with the workshop participants, and will gather and analyze any new data that is needed to further understand the lake system. A critical stage in the process is the development of standards and objectives. Brown said that sometimes the objectives might take the form of consequences the stakeholders would like to avoid.

"We want to document what people's fears are," Brown said. "Second, we want to set standards to assure ourselves that our goals are achieved. We've already

heard, for example, that people want to avoid, completely, any damage to infrastructure from subsidence."

To establish the standards, Brown said the process must identify measurable indicators to give an early warning that a problem could occur that would be inconsistent with an objective — such as avoiding damage resulting from subsidence, for example.

Once the objectives and standards are established, they will be used to evaluate any proposed pumping by LADWP.

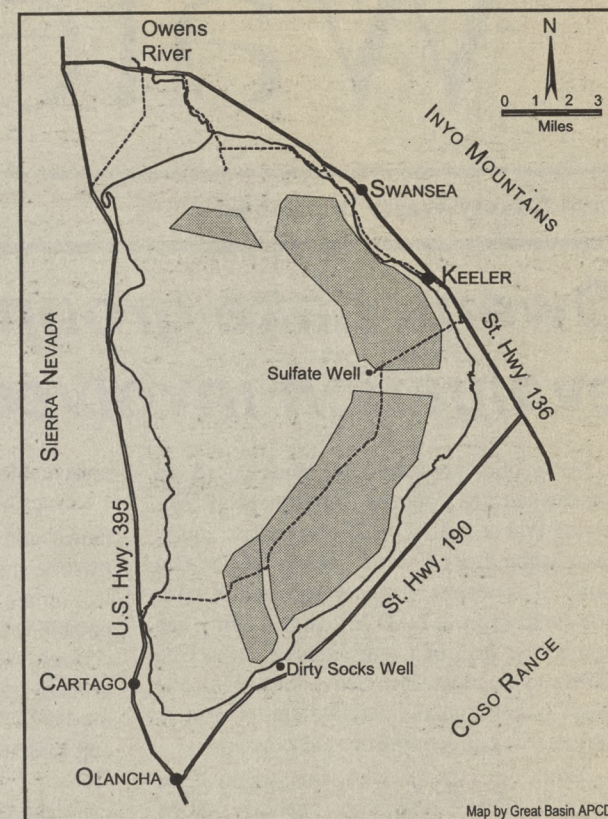
If the proposed pumping seems feasible, then CDM will conduct an evaluation of the proposal through the California Environmental Quality Act (CEQA). The final product will come when CDM develops a long-term work plan for ongoing studies and management of the project.

"The work plan will define the monitoring that has to go on, over the long run, in order to continue to understand how pumping activities affect the lake and surrounding area and the folks living there," Brown said.

CDM plans to present the work plan in September 1999 to the Inyo/Los Angeles Standing Committee. LADWP's Gewe said that if the Standing Committee decides, based on the work plan, that pumping groundwater from underneath Owens Lake for

dust control is not a viable option, then LADWP will use another water source.

"The City of Los Angeles is committed to abating the dust regardless of the source of water," Gewe said. "We are only going to be using groundwater to the extent that it can be done consistent with responsible environmental management. We are committed in that we're not going to leave the Town of Keeler without water. We are committed in that we're not going to cause subsidence damage to buildings at Keeler."



Owens Lake — Under an agreement with the Great Basin Unified Air Pollution Control District, in 2001 LADWP must implement dust control measures on 10 square miles within the 35-square mile area shown in gray. A schedule provides for incremental implementation after that. By 2006, LADWP must have attained federal air quality standards.

MOU meeting Jan. 28

Parties that signed the 1997 Memorandum of Understanding (MOU) concerning Los Angeles' water activities in the Owens Valley will meet at 9 a.m. on Jan. 28 in Bishop. The MOU parties are the California Department of Fish and Game, the State Lands Commission, the Owens Valley Committee, the Sierra Club, Inyo County and the Los Angeles Department of Water and Power (LADWP). The MOU resolved concerns between the parties over the Lower Owens River Project and other provisions of a 1991 environmental impact report concerning LADWP's groundwater pumping operations and related activities.

Items to be discussed include the development of management plans for the Lower Owens River Project, and the status of an inventory of Owens Valley springs and seeps.

The meeting will be held in LADWP's conference room on Mandich Lane. The public is invited to attend.



Flowing — An artesian well on Owens Lake. Photo by Leah Kirk

OWENS VALLEY Water Reporter

Produced by the Inyo County Water Department (ICWD) in Bishop, California, and distributed in the Inyo Register.

The ICWD was formed in 1980. Its mission is to monitor the Owens Valley environment, manage and protect the valley's water resources, conduct research, and educate the public on Inyo County water issues.

The purpose of this newsletter is to provide information on ICWD activities and Owens Valley water issues, and on other Inyo County and Eastern Sierra water issues.

Department Director: Greg James
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If you have comments on the newsletter or would like to be put on the mailing list, write:

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Regulation, from front page

sponse to impacts to the Owens Valley environment from Los Angeles' water gathering activities. "The county's been involved ever since," James said. Los Angeles challenged the ordinance, and eventually the Inyo County Superior Court issued a ruling invalidating the ordinance, although it did not enter a final judgment. Instead, Inyo County and Los Angeles entered negotiations which eventually resulted in the adoption in 1997 of the jointly drafted Inyo/Los Angeles Long-Term Water Management Agreement, which applies to LADWP's water gathering activities, including groundwater extraction and surface water diversions, in Inyo County.

In the mid-1980s, a new bill was before the state legislature that would open opportunities for others to transport water. The Katz Bill required aqueduct owners to make unused aqueduct space available for water wheeling — the transport of water by someone else for use elsewhere. Inyo County was opposed to the bill. However, when it appeared certain that the bill would pass, the Inyo Board agreed to a compromise in which the bill was amended so that transfers could not unreasonably affect the overall economy or environment from which the water was wheeled.

In 1991, Anheuser-Busch proposed wheeling water from its Cabin Bar Ranch in Cartago via the Los Angeles Aqueduct to its Van Nuys brewery. Partly in response to this proposal, Inyo County further strengthened its control over water exports by adopting an ordinance that required a conditional use permit be obtained for any proposed water-wheeling projects in the county. (Incidentally, Anheuser-Busch never obtained a conditional use permit, and so its project has not progressed.)

A turning point in local groundwater regulation came with a case in Tehama County that began during the drought of the late 1980s, when that county's supervisors adopted a groundwater ordinance prohibiting the export of groundwater from Tehama County. A Tehama County farmer, who had sought to pump groundwater in Tehama to supply his ranch in an adjoining county during the drought, challenged the ordinance, saying it was pre-empted by state law. Although the Tehama County Superior Court ruled the ordinance unconstitutional, the case then went to the appellate courts where, in 1994, the ordinance was validated.

"The case answered the question: 'Does a county have a right to regulate groundwater?'" James said. Because the courts ruled in favor of Tehama County, the answer was affirmative. "Now, how extensive the County's regulatory powers are is still an unanswered question."

More export proposals

Since Tehama, yet more water transfer projects have been proposed in Inyo County, and not all of them in the Owens Valley. Within the last year, "there have been proposals to pump water from the Amargosa Valley, and from Inyo County near Pahrump, and send it across the state line into Nevada," James said.

Those proposals, the knowledge of the proposed Western Water project, and the potential for more export proposals, prompted the Inyo County supervisors to adopt an urgency groundwater ordinance. The permanent ordinance was adopted in October. James said the County's ordinance requires that any project falling under the ordinance must not have an "unreasonable effect on the economy or environment of the County" — standards established by the state legislature with the Katz Bill. And the ordinance borrows a standard from the California Environmental Quality Act concerning avoidance of significant adverse effects on the environment, James said.

Details of Inyo's new groundwater ordinance

The groundwater ordinance, which was passed by the Inyo County Board of Supervisors on Oct. 27, 1998, and became effective on Nov. 27, 1998, requires that a conditional use permit be obtained from the Inyo County Planning Department for any project involving a transfer or transport of groundwater from Inyo County groundwater basins or the sale of surface water or groundwater to the City of Los Angeles. It also applies to certain transfers of surface water and to bottled water truck transfers if they exceed one acre-foot of water per year (one acre-foot equals 325,000 gallons. Five tanker trucks can carry about 100,000 gallons, and so 15-20 tanker trucks per year equals about one acre-foot).

The ordinance exempts water transfers already taking place within a year prior to its passage. And the ordinance does not apply to groundwater pumping and export by Los Angeles, which already is covered under the Inyo-Los Angeles groundwater agreement.

Inyo County Water Department Director Greg James said the ordinance expands Inyo County's ability to regulate groundwater beyond the 1991 groundwater ordinance regulating the transfer of water via the L.A. Aqueduct — "water wheeling" — and beyond the Inyo-Los Angeles Water Agreement which governs Los Angeles' pumping activities in the Owens Valley. The new ordinance adds regulation of other transfers or transports from within or partially within any of the 38 groundwater basins in the county. For another, it expands the role of the Inyo County Water Commission (See "Role of Water Commission expands," this page).

The ordinance applies to:

- ♦ Any water transfer from the unincorporated area of Inyo County undertaken pursuant to Water Code 1810 et seq. (the code which this ordinance amends);
- ♦ Any sale to the City of Los Angeles, or an acquisition by the City of Los Angeles by means other than a sale, of surface water or groundwater diverted or extracted from within Inyo County;

"The ordinance employs existing, recognized standards," James said. "So, it's legally defensible. This is reinforced by the agreement of the Inyo-Los Angeles Standing Committee [the joint decision-making body governing Inyo-Los Angeles actions under the agreement] that Los Angeles won't buy any water from Inyo County if it is deemed by the County that extraction or diversion of that water will have an adverse effect on the County's environment or economy."

Although the ordinance is as legally sound as it possibly could be, James admits that someone could challenge it — most likely someone desiring to wheel water through the Los Angeles Aqueduct. Nevertheless, he said the ordinance is "one of the most comprehensive countywide groundwater ordinances in existence in the state."

He said there is no statewide standard in California for the regulation of groundwater. While most other Western states require a state permit to pump groundwater, in California it is up to local governments to set the laws, James said. As a result, there are about 20 groundwater ordinances in California.

"Groundwater regulation is a big issue in many rural areas because of an increased interest in groundwater transfers statewide," James said.

He said one reason for increased interest in Eastern Sierra water transfers, ironically, is the result of successes in cases involving regulation of Los Angeles' water activities in order to protect the environment: Mono Basin litigation, which resulted in Los Angeles being required to drastically reduce diversions from streams feeding Mono Lake until the lake rises to a certain level; the Inyo/Los Angeles water

management agreement which has greatly reduced groundwater pumping from the Owens Valley; and the recent commitment by Los Angeles to provide water to mitigate dust problems on Owens Lake.

"These events have directly resulted in a decrease in flow in the Los Angeles Aqueduct, and therefore more capacity to wheel water to third parties, or sell water to L.A.," James said. "The irony is, local folks have worked hard to protect themselves and to protect their environment, and as a result of their efforts, the door has opened to the private sector to try to use the aqueduct to sell water outside the area."

Role of Water Commission expands

Since its inception in 1980 with the adoption of Inyo County's first groundwater ordinance, the Inyo County Water Commission has focused on Owens Valley water issues. Now, with the new water transfer ordinance, the commission's role has been expanded to include water issues and concerns countywide.

The five-member commission:

- ♦ is involved in Owens Valley water management and environmental protection;
- ♦ advises the county board of supervisors on technical and policy matters;
- ♦ has membership on the Inyo/LA Standing Committee; and
- ♦ serves as conditional use permit advisors to the county planning commission on water-related projects.

Projects the commission will be working on include the Owens Dry Lake cooperative studies; the Lower Owens River Project; other cooperative studies related to groundwater management, Western Water's pumping proposal, and the Big Pine Ditch System.

The ordinance is part of 'a pattern of response by the county to ... threats of water transfers.'

— Greg James, ICWD Director

Top-flight team begins Valley air photo study

An air photo study, first envisioned nearly a decade ago, is at last underway in the Owens Valley. On Dec. 8, the Inyo County Board of Supervisors approved a contract with Ecosat Geobotanical Surveys, Inc., to begin the first part of the two-phase study funded by the Los Angeles Department of Water and Power (LADWP).

Under the contract, the consultant will review existing air photos of selected areas in the valley dating as far back as 1944 to see whether they will be useful in identifying past vegetation changes and in refining the baseline vegetation maps used in vegetation management under the Inyo/Los Angeles long-term groundwater management agreement. The consultants also will evaluate whether air photos and other remote sensing techniques, such as satellite imagery, should be incorporated into the ongoing vegetation monitoring in the valley.

Commitment

The water agreement requires that LADWP's groundwater pumping be managed largely based on vegetation conditions. The air photo study will use historical data — the air photos — to gain a greater understanding of Owens Valley vegetation.

The air photo study is a commitment made by Inyo County and LADWP in the 1991 environmental impact report (EIR). The EIR examined the impacts from Los Angeles' water gathering activities in the Owens Valley from 1970 to 1990 and from 1990 onward, under the water agreement. Later, a protocol for the study became part of a Memorandum of Understanding (MOU) between the California Department of Fish and Game, the State Lands Commission, the Owens Valley Committee, the Sierra Club, Inyo County and LADWP.

Dr. Sally Manning, Inyo County vegetation scientist, said analyzing the photographs could be a challenge, given that the various sets of photographs differ: some are black and white, others are "true color." The scale varies from one set to another, as does the quality and even the time of year in which the photographs were taken.

"For example, long shadows extend from shrubs and trees in some photos, thus obscuring other features of vegetation," Manning said. "These and other technical difficulties necessitated the hiring of experts in the field of air photo interpretation."

The study — Task 1

The first task for the consultants will be to gather all of the data necessary to look for vegetation change. These data include the old air photographs, reports and maps, field data, and dated ground photos taken at known points. Next they will select representative land areas for analysis and devise a system to characterize the vegetation types. Then

the air photo analysis will begin.

"One of the end products will be GIS (geographical information system) maps for the different time periods of air photos," Manning said. "These maps will be used to determine where vegetation has changed and how it has changed."

Depending on their ability to detect change in the photographs, the consultants will look for environmental factors that could be responsible for the change, such as drought, groundwater pumping, surface water diversions,

fires and other events. They will compare areas where pumping or other human activities have not occurred with areas that have been pumped. From this, they hope to gain an understanding of natural changes in vegetation as a background for understanding any observed changes in areas affected by pumping.

Task 2

In the second major task, the consultants will evaluate the 1984-87 vegetation basemaps of the selected sites using air photos from 1981 (no photos were taken between 1984 and 1987) in conjunction with satellite imagery taken between 1984 and 1987. The aim of this task is to improve as much as possible the accuracy of the map of vegetation conditions that existed between 1984 and 1987, the baseline period for the water agreement.

If the initial study of the air photos is successful, Inyo and Los Angeles will move on to the second phase of the study, which will be to complete the analysis of the photographs for the entire valley.

Task 3

The third task for the consultants will be to advise the Inyo/Los Angeles Technical Group on the use of remote sensing to monitor vegetation in the future. Remote sensing includes aerial photography and satellite imagery.

Manning said understanding how Owens Valley vegetation responds to pumping and other water gathering activities should improve the Technical Group's ability to monitor and manage. Not only that, the knowledge gained through the study of previous vegetation conditions at impacted sites will help managers to more effectively mitigate adverse effects identified in the EIR.

"This study could prove to be a fascinating and timely merging

of history, traditional air photo interpretation techniques, vegetation classification, GIS, and emerging remote sensing technologies," Manning said. "And they will be applied to help Inyo and Los Angeles with our real-world management challenges."

The consultants

The consultants hired to perform the air photo study are three highly experienced air photo interpreters.

Dennis Jaques

Dennis Jaques, president of Ecosat Geobotanical Surveys, Inc., has conducted field ecological research and remote sensing work throughout North America and the world since 1966. He also worked as a biologist/remote sensing consultant for EarthSat Corp., of Berkeley, and as a professor of environmental science at the University of Calgary, Alberta, Canada. He has specialized in air photo interpretation since 1972. While employed with EarthSat Corp., Jaques interpreted air photos of the Owens Valley for LADWP.

Dr. Robert N. Colwell

Dr. Robert N. Colwell trained with the U.S. Navy in photo interpretation in 1942. He conducted mapping on Guadalcanal in 1942-43, and, as Chief of Photo Intelligence, conducted mapping for the planning and execution of the Okinawa Campaign. He became director of the U.S. Naval Training in Photo Interpretation and Photogrammetry in 1945. He was a professor at U.C. Berkeley for 36 years, and he served two years in the Korean War as Director, U.S. Navy Photo Interpretation/Photogrammetry Programs and also for Project SANDS during the Vietnam War. He has served as National Director, Naval Reserve Intelligence Program, training officers in photo interpretation.

Dr. Charles E. Poulton

Dr. Charles E. Poulton served nine years with the U.S. Forest Service as a research and resource manager from 1948-1956. He was a professor of range ecology and management at Oregon State University for 26 years, and also served as the department head. For two years, Poulton was Director of Rangeland and Ecology Programs for EarthSat Corp. He worked in Rome, Italy, with the United Nations, as Director of Rangeland and Pastures Program for the Food and Agricultural Organization. He also served three years as Senior Training Officer for the NASA-Ames Research Center's Western Regional Remote Sensing Training Program.



Cut and treat — Cutting saltcedar then spraying herbicide on the stumps has proven an effective means of controlling the weed.

Photo by Leah Kirk

Saltcedar crew forges south

Using saws and herbicides, Inyo County's saltcedar control crew continues to work south down the Owens Valley, eradicating saltcedar plants in a program based on the principles of wildfire management.

Brian Cashore, manager of the saltcedar control program and crew leader, said the "biological wildfire" of saltcedar — an invasive weed in the Owens Valley — is best controlled by a combined program of prevention, detection, and containment.

"The idea is to contain the spread of weeds at the edges and work inwards toward the denser populations," Cashore said. "So the focus is on the outlying populations that can be contained."

Saltcedar grows most densely in the lower Owens River channel just below the Los Angeles Aqueduct intake, and in the area from Blackrock Fish Hatchery down the central portion of the valley, west of the Owens River, to Billy Lake. Saltcedar moved into the channel after the river was diverted by Los Angeles into its aqueduct. And, saltcedar moved into the Blackrock-south stretch following water spreading on the valley floor by Los Angeles during especially wet winters in the late 1960s.

Because the core area of saltcedar is within the lower Owens River, Cashore said a \$1 million portion of a \$3 million grant to rewater the lower Owens River has been allotted specifically for the saltcedar program.

The saltcedar field work began in the winter of 1997-1998, when ICWD employees Cashore and Rick Puskar cut and treated outlying plants at Hogback Creek. They also worked with 15 inmates from the California Department of Forestry at Farmers Pond, Calvert Pond and Oak Creek. Then, three seasonal employees joined the team — Bruce Klein, Chuck Spresser and Bryan Taylor — and in September 1998 they continued with the containment approach.

"We skipped Tinemaha itself, because to focus on that area at this time would result in outlying plants continuing to spread their seeds further," Cashore said. "But the area from Tinemaha down to the aqueduct intake has been totally cleared of saltcedar."

The work consists of manually cutting the trees with chainsaws or loppers and immediately treating the cut stumps with an environmentally safe herbicide.

"After the season, Rick and I will be doing the follow-up, cutting and respraying," Cashore said. "There can be quite a bit of resprouting, and follow-up work is essential. You have to monitor the previous season's work."

Water Reporter

Inyo County Water Department

Volume 11 Number 1

July 1998

Town water system transfers offer new opportunity

■ Historical perspective: how Inyo, LA, and valley towns got to the point of transfers

When the Inyo County/Los Angeles long-term water agreement went into effect one year ago, it set in motion a five-year process to transfer ownership of the town water systems in Lone Pine, Independence, Big Pine and Laws to local entities or the county.

During this five-year period, the county or a local public entity must assume responsibility for the operation and maintenance of, and billing for, the systems.

This process is the latest chapter in a long story. Originally, each town water system was locally owned and controlled. However, over a period of some 40 years, all of the systems were voluntarily transferred to the City of Los Angeles. When Los Angeles announced its intent to install water meters and to significantly increase water rates in the mid-1970s, the county unsuccessfully attempted to block the move. Later, the county succeeded in negotiating lower water rates for the four communities.

Returning each town water system to local ownership and having LADWP supply free water to the systems provides each community the opportunity for the lowest possible water rates. What follows is an outline of the history of the four Owens Valley water systems.

LA acquires water systems

During a period from 1934 to 1972, the City of Los Angeles Department of Water and Power (LADWP) purchased the water systems in the towns of Lone Pine, Independence, Big Pine and Laws. Community service districts or water companies that had operated the systems requested LADWP purchase the systems. All four water systems were voluntarily sold to LADWP by each community operator.

Flat water rates

Until the 1970s, there were no water meters on commercial or residential customers, and a flat water rate was charged regardless of the amount of water used.

Installation of non-residential water meters

Between December 1973 and August 1974, LADWP initiated a trial water metering program on selected non-residential customers in Lone Pine, Independence and Big Pine. Water meters were installed on the service connections of 26 non-residential customers during this period. After one year of the trial, the metering program was expanded to cover the installation of water meters on the service connections of all remaining non-residential customers in the four towns. Despite the installation of water meters, water rates continued to be based on a flat, unmetered rate.

Water metering, metered billing, Inyo reaction

In the spring of 1975, LADWP announced its intent to

See **Town water**, page 3



Seth Muniz, of Lone Pine, gets a boost from grandfather Manuel Muniz to cool off a warm day at the park in Lone Pine. Town water systems supply commercial, residential, and municipal uses such as this drinking fountain.

LADWP proposes Owens Lake groundwater pumping

Last spring, the Los Angeles Department of Water and Power (LADWP) announced its desire to develop a groundwater supply from Owens Lake. LADWP would use the groundwater to implement dust abatement measures on the lake, or to further research of existing or alternative dust control approaches within the confines of the lake bed. Recently, LADWP informed Inyo County of its desire to initiate interim pumping as early as the fall of 1999. The interim pumping would be from existing wells or from new wells constructed in the vicinity of existing wells. In the long run, LADWP's desire is to pump as much groundwater as possible from under Owens Lake for dust abatement on the lake bed.

The Great Basin Unified Air Pollution Control District (APCD) has ordered LADWP to control dust on Owens Lake. Although the APCD's order requires the use of water, the order did not specify the source of the water. LADWP would like to use as much non-potable groundwater from under the lake as possible to supply the dust abatement measures. Under the provisions of the Inyo County/Los Angeles long-term water

agreement, any groundwater pumping by LADWP within Inyo County (including from Owens Lake) is to be managed as provided in the agreement. These provisions apply to both the interim and long-term pumping proposed by LADWP.

To evaluate the amount of groundwater from under the lake, if any, that may be extracted and managed in accordance with the agreement, on June 4 the Inyo County/Los Angeles Standing Committee agreed to conduct cooperative studies of the lake's hydrology and environment. The Technical Group will develop and conduct the cooperative studies with the assistance of consultants. The Technical Group will manage the studies; however, the consultants will work under contract with the county, and LADWP will pay to the county all costs of conducting the studies.

The studies will assist the Standing Committee and Technical Group in managing any groundwater pumping so as to avoid potential adverse environmental consequences. Thus, the studies will fully evaluate and quantify all potential environmental consequences of both LADWP's proposed

interim and long-term groundwater pumping from Owens Lake including the potential for: 1) groundwater mining; 2) water quality and quantity impacts on current and future groundwater extractors in the vicinity of the lake; 3) impacts on wetlands, springs, and riparian habitat on the lake bed and in the vicinity of the lake; 4) subsidence; and 5) impacts on the Lower Owens River and its delta on the north shore of the lake.

The studies will not address how any groundwater pumped from the lake will be used in the dust-control measures on the lake

bed. The county will not be involved in that decision. APCD, LADWP, and other agencies have that responsibility. The county's role will be limited to ensuring that any groundwater pumping from Owens Lake by LADWP is conducted in accordance with the environmental protection provisions of the long-term water agreement.

The Standing Committee agreed that all potentially affected parties (especially the APCD and the State Lands Commission) will have the opportunity to provide input

See **Owens Lake**, page 2

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Potential Olancha project under county scrutiny

■ Inyo/LA Standing Committee reaffirms pumping constraints

Spurred by potential water export projects in Olancha and Rose Valley, Inyo County and Los Angeles have agreed that Los Angeles will not purchase or acquire water from sellers within Inyo County unless a critical condition is met: the water seller must first reach a formal agreement with the county to manage its extractions or diversions "in a manner that insures the protection of the county's environment and economy."

The agreement is timely, as Western Water Company, of San Diego, is investigating groundwater supplies under ranches in the Olancha and Rose Valley areas of the county. Its proposed Olancha project includes purchasing about 2,100 acres of land, pumping groundwater from wells on those properties, and selling the groundwater to Los Angeles for transport via the Los Angeles Aqueduct.

Psomas and Associates, Inc., a consulting engineering firm under contract with Western Water, conducted a pump test in March and early April at two wells in Olancha. Psomas pumped each well continuously for 72 hours, then monitored a network of nearby wells over the next 72 hours to see how water levels recovered. The test will be used to evaluate the project's potential impacts on private wells and vegetation and the potential for groundwater mining.

County consultants reviewed and approved the pump test procedure before the test began and are assisting the county in

evaluating the results. Western Water paid \$30,000 to the county to cover the costs of the preliminary work by the county's consultants.

Greg James, director of the Inyo County Water Department, said that if any pumping project is to proceed it first must be shown that the project will not harm the county's environment or its economy, and that it will not result in groundwater mining. James also said that the company will have to pay 100 percent of the county's costs to evaluate the project and prepare an environmental impact report. And finally, the ultimate fate of the project will be up to the Inyo County Board of Supervisors.

According to James, Western Water has agreed to plan and manage any Olancha or Rose Valley project consistent with the goals of the Inyo/Los Angeles long-term water agreement. Accordingly, the project will have to protect groundwater-dependent vegetation, springs, seeps and wetlands, threatened and endangered species, and private wells. It will have to avoid abandonment of agriculture, blowing dust, and loss of existing trees and housing. It will have to mitigate any significant adverse environmental impacts it may create. And it will have to cover all county costs to evaluate and manage the project.

James said Western Water and Inyo County are currently developing an agreement (or "MOU") that will commit Western Water to pay all additional costs for the county's evaluation of the hydrological, environmental, and economic impacts of the proposed Olancha project. James stressed that such an agreement by itself will not allow the project to proceed. The project will only proceed if a subsequent agreement is

A primer on Western Water

Western Water acquires, develops and markets wholesale water supplies to cities and water districts throughout the western United States. Its assets total about \$40 million, according to the company's 1997 annual report. That report states that it acquires water rights through direct purchase of the water or through land acquisition, such as could happen with its Inyo County projects. Its water development involves obtaining regulatory approvals and, in some cases, constructing facilities to produce or transport water to a buyer. Its marketing arm sells or leases water to agencies in growing population areas, focusing on Southern California, the Sacramento Delta region, and Denver, Colo.

As an example, Western Water has a 10-year contract to buy surplus water from Elsinore Valley Municipal Water District and deliver the water via the Santa Ana River to the groundwater recharge basins of Orange County. There, the Santa Margarita Water District has contracted with Western Water to purchase the water for its burgeoning population.

Another example of Western Water's strategy is its ongoing attempts to develop Northern California water supplies in the Delta area to sell to its customers in Southern California. Western Water is pursuing purchase, transfer, storage and marketing to this end.

approved by the county Board of Supervisors following the completion of all necessary evaluations. This agreement will contain enforceable commitments to manage the project to protect the county's environment and economy.

The pump test

County consultants Andy Zdon and Bill Hutchinson have pored over a two-inch-thick draft report of data from the Olancha pump test. Zdon, of TEAM Engineering in Bishop, said they returned several pages of comments to Psomas and Associates in response to the report.

"This aquifer testing and report will become the foundation for development of groundwater modeling and analysis of potential impacts," Zdon said. "That's why it is so important that this data and analysis are accurate."

Zdon added, however, that it is "too early to talk about impacts" the project may

cause. This must await the completion of additional evaluation.

An inventory of plants and animals prior to the Olancha pump test revealed no sensitive habitats or threatened or endangered species that would be affected by the pump test. Mark Bagley, a consulting biologist in Bishop, performed the survey for Psomas and Associates in March.

Bagley did caution, however, that further biological surveys would be needed should the project proceed beyond the pump-test phase. In particular, he noted the need to map groundwater-dependent vegetation and known populations of sensitive species. These include several plant species that could be affected by either surface disturbance or groundwater pumping. In addition, some sensitive animal species that might depend on springs, wet meadows and marshes near the wells could be affected if pumping impacts those habitats.

County now regulates all Valley water exports

An agreement of the Inyo County/Los Angeles Standing Committee last January closed the last loophole in the county's protective net over water exports from the Owens Valley. With the adoption of the Standing Committee's policy, Inyo County now has the authority to regulate all water exports from the Owens Valley.

Prior to last January, the City of Los Angeles had agreed it could not export water from the Owens Valley without complying with the environmental protections built into the Inyo/LA long-term water agreement. Similarly, if someone wanted to use the Los Angeles Aqueduct to transfer water to a party other than the City of Los Angeles, the transfer would require a conditional use permit from the county pursuant to County Ordinance No. 901. Under that ordinance, the county is prohibited from issuing a conditional use permit unless it has first found that the water transfer will not unreasonably affect the county's environment or economy. Also, by county ordinance anyone wishing to establish a water-bottling plant or to export water by truck would have to obtain a conditional use permit.

The Standing Committee's interim policy provides that the City of Los Angeles will not purchase any water diverted or extracted from Inyo County by a third party unless the county is satisfied that the purchase will not adversely affect its environment or economy. It is an interim policy because the Technical Group must consider revisions before a permanent policy can be adopted. Two votes are required to rescind the policy. Inyo County possesses one of the votes, so the policy cannot be changed without county approval.

Hydrologist uses water history to plot future

Keeping track of underground water in the Owens Valley is an essential role of the Inyo County Water Department. That deceptively simple-sounding job falls in part on hydrologist Bob Harrington, who is working with ICWD Hydrologist Randy Jackson. Harrington is under contract with ICWD.

Harrington, new to ICWD this year, brings his expertise to bear on a critical question: What are the effects of groundwater pumping on shallow aquifers in the Owens Valley?

The bulk of Harrington's work involves a statistical analysis of historic water levels in some 400 shallow monitoring wells throughout the valley. Harrington calls it a simple model but, based on data going back to 1970, it's powerful.

"With this long time scale and large spatial scale, it gives us insight into how pumping affects shallow aquifers," Harrington said. "Our challenge is to predict the depth of the water table, based on precipitation, runoff, and pumping."

The outcome of his work will influence how groundwater pumping is managed in the future. Further, his results can be combined with parallel ICWD efforts — monitoring of valley vegetation and soil moisture.

Harrington is no stranger to the Owens Valley. He first lived here from 1977-85, working at what was then Wheeler and Wilson's outdoor sports shop. He moved away to further his education: a B.S. in geophysics and an M.A. in hydrology and hydrogeology, both from the University of Nevada Reno; and a Ph.D. in hydrology with an emphasis on snowmelt runoff from the University of Arizona. With his education and his love of outdoor recreation, Harrington is in his element studying the hidden waters of Owens Valley.

Owens Lake, from page 1

into the design of a study work plan. The APCD and the State Lands Commission will have the opportunity to participate in the studies, and affected parties and the public will be informed as to the progress and results of the studies. The Standing Committee also agreed that the approval of a study work plan and the subsequent adoption of groundwater management by the Technical Group and the Standing Committee will be a public process.

Affected parties include the APCD, the California State Lands Commission, the California Air Resources Board, the U.S. Environmental Protection Agency, the Lahontan Regional Water Quality Control Board, the California Department of Fish and Game, the China Lake Naval Air Station, the U.S. Forest Service, the U.S. Bureau of Land Management, the Owens Valley Indian Water Commission, the Keeler Community Services District, the Crystal Geyser water bottling plant, and any potentially affected users of groundwater, among others.

Based upon responses to a "Request for Proposals," and interviews with several firms, the county and LADWP selected the firm of Camp Dresser & McKee, Inc. (CDM) to assist in developing a study work plan and evaluating LADWP's proposed interim pumping. Once a final contract with CDM is awarded, the firm will meet with all affected parties and the public to hear concerns over the proposed groundwater pumping. The firm will also gather and analyze all existing data regarding the lake. Based on this information, the firm will recommend additional studies and other work necessary to evaluate the LADWP proposal. CDM should begin work in the near future.

Town water history, from page 1

seek a general water rate increase for the Owens Valley towns. The proposal called for the installation of water meters on all residential customers and a special rate schedule during the period of the installation of meters.

On June 17, 1975, the Inyo County Board of Supervisors passed a resolution opposing the imposition of the water rate hike because of the lack of public involvement in the setting of the rates, and because of the adverse economic impacts of metered rates on low- or fixed-income customers.

On September 18, 1975, the LADWP board temporarily excluded the Owens Valley from the rate hike imposed on customers within the City of Los Angeles. However, despite the exemption, the LADWP took action that would subsequently require the imposition of water rates in the Owens Valley equal to those charged in LA.

Metered billing of commercial customers

In 1976, LADWP announced its intention to commence metered billing of commercial water customers in the four Owens Valley towns. Water rates subsequently were increased from flat rates to those charged within the City.

Water meters on all residences, county attempt to block, and metered residential billing

In February, 1978, LADWP announced that it would install water meters on all residential customer service connections and commence metered residential billing within one year.

Following LADWP's announcement, the county commenced litigation in Fresno County Superior Court seeking to block the rate increase. When the Superior Court denied the requested injunction, the county filed a complaint with the California Public Utilities Commission (PUC). In its complaint to the PUC, the county pressed for regulation of LADWP's monopoly position since Owens Valley customers were at the mercy of LA City Council members over which valley customers had no voice as voters or taxpayers.

The PUC dismissed the county's complaint. The county then appealed to the California Supreme Court. In 1980, the state's highest court ruled that despite the fact that it was sympathetic to the plight of the customers in the Owens Valley, the PUC was without legislative authority to regulate LADWP.

The county also commenced litigation in the Inyo County Superior Court, seeking an order requiring LADWP to comply with the California Environmental Quality Act prior to deciding to install residential meters and to impose residential metered rates. The court found LADWP actions exempt from compliance with the environmental laws.

In the absence of court-imposed restrictions, LADWP subsequently installed meters on all Owens Valley residential customers and commenced metered residential billing with rates equal to those within the City of Los Angeles.

Negotiation of lower water rates

Frustrated in its attempt to obtain court protections for Owens Valley town water customers, the county opened negotiations with LADWP seeking an agreement to lower

town water rates. In 1984, as part of an interim agreement over LADWP's groundwater pumping in the Owens Valley, it was agreed that residential and non-residential water rates would be reduced to one-half of the rates in effect in August, 1983.

County leases town water systems

In order to comply with laws in the City of Los Angeles which require LADWP to charge water customers located outside the boundaries of the city, the county leased the Lone Pine, Independence and Laws water systems from LA as part of the interim settlement agreement. (Prior to the interim settlement agreement, the Big Pine Community Services District leased the Big Pine water system from LADWP.)

As the lessee of the systems, the county, by ordinance, set the water rates at the agreed level of one-half the rates in effect in August, 1983. As part of the agreement, the county contracted with LADWP to operate the three water systems in exchange for receipt of all revenue from the reduced rates. (The Big Pine CSD continued to lease and operate the Big Pine water system. Under the interim agreement, it has received \$25,000 a year from LADWP.)

LA balks at continued operation at reduced rates

During the late 1980s and early 1990 when the county and LADWP were in negotiation on what became the Long Term Water Agreement, the county sought to have LADWP agree to permanently operate the town water systems at the reduced rate as a mitigation measure for environmental impacts caused by LADWP's water operations in the valley. Los Angeles steadfastly refused to do this, and countered that unless the town systems were transferred to the county or to local ownership, LADWP would hike the previously frozen water rates several fold to the much higher rates then in effect in the City of Los Angeles.

Long-term agreement provides for systems transfer

Given LADWP's adamancy that ownership of the town water systems either be transferred to local control or water rates would skyrocket, the county negotiated a compromise. Under the terms of the long-term agreement, the county, or a local public entity, will assume ownership of the water systems by June 2002. After the transfer of ownership of the water systems, LADWP will continue to bear all costs of operating and maintaining the wells that supply water to each system.

In addition, LADWP must provide water, up to specified amounts, at no cost to each system (including Big Pine). Use of water in excess of the specified amount requires payment to LADWP of its incremental costs of operating the wells and reservoirs to supply the excess water. Under the long-term agreement, the Big Pine CSD will receive the same benefits and opportunities as the other water systems.

Upgrade of water systems

During the period prior to the transfer of ownership of the water systems, the county and LADWP will select an impartial engineering firm to inspect each system (including Big Pine) for compliance with all applicable requirements. The costs of the inspections will be funded by LADWP.

LADWP is required to make any repairs or alterations necessary to bring each system into compliance with the applicable requirements.

LADWP and the county are in the process of developing a contract with Boyle Engineering to conduct the evaluation. It is anticipated that the evaluation will be completed by next winter. The results of the evaluation will be presented to the public by the engineering firm at that time.

Also, during the period prior to the transfer of ownership, the Lone Pine reservoir will be replaced by LADWP with a new reservoir with a 500,000-gallon capacity. LADWP will upgrade the Independence reservoir to meet seismic requirements or, alternatively, LADWP shall be responsible to repair any damage to the reservoir caused by an earthquake for a 15-year period.

Operation prior to transfer

Effective June 1997, when the long-term agreement was entered as a court order, the county or another public entity or entities have the responsibility for setting water rates and operating and maintaining each of the water systems. During this period, LADWP will operate the wells, pumps, chlorination equipment, and reservoirs and provide free water to each system up to specified limits.

The lease and operations agreement signed as part of the interim settlement agreement in 1984 has remained in effect to this time. Consequently, since June 1997, the county has continued to lease the three water systems and LADWP has continued to operate the three systems.

LADWP seeks increase in compensation for operating the systems

On April 6, 1998, LADWP informed the county that it was no longer willing to operate and maintain the three systems in return for the receipts of the revenue from the frozen water rates. Instead, effective July 1, 1998, if LADWP is to continue to be responsible for the operation and maintenance of the three water systems, LADWP wants to be compensated for its cost. Given the costs quoted by LADWP in its April 6 letter to the county, water rates in the three towns would have to be increased two-to-three fold to recover the increased costs.

On June 4, 1998, the Inyo County/Los Angeles Standing Committee agreed that no retroactive payment need be made to LADWP for its costs of operating and maintaining the systems since June 1997, and that no increase in compensation would occur until Sept. 1, 1998. If LADWP continues to be responsible for the operation and maintenance of any town water system after that date, the county will then reimburse LADWP for its actual costs of such work.

County seeks less expensive alternatives

On May 12, 1998, the Inyo County Board of Supervisors released a "Request for Proposals" seeking proposals from qualified organizations or individuals to assume operation and maintenance of the water systems in Lone Pine, Independence and Laws. Two proposals have been received for operation and maintenance of each system. The county hopes to contract for operation and maintenance of each system as early as this summer, and at a cost less than LADWP's cost.

Water rates prior to transfer

The county is making every effort to

keep water rates in the three valley towns as low as possible. The county will select the qualified entity or individual to operate and maintain each of the three systems at the lowest cost. Water rates will be set based upon the cost of the contract for the operation and maintenance of each system, less the costs of the wells, pumps, chlorination equipment and reservoirs, which will remain LADWP's responsibility.

Water rates following transfer

Once each system has been repaired and/or upgraded, and following the transfer of the system to the county or to another public entity, water rates will be set by the Board of Supervisors, or by the public entity that owns the system. Because each system should be in good condition at the time of the transfer of ownership, and because LADWP will be obligated to provide water to the system at no cost (up to specified limits), relatively low water rates should be able to be maintained.

What entity will be in charge?

Following the entry of the long-term agreement as a court order last June, the county established advisory committees in each town. One of the responsibilities of the advisory committees is to recommend whether a local public entity should be responsible for the water systems. The town of Independence committee has recommended that a community services district assume this responsibility. The Lone Pine committee and the Laws subcommittee of the Bishop committee have yet to make recommendations.

Water Reporter

Produced by the Inyo County Water Department (ICWD), Bishop, California, and distributed in local newspapers and by mail.

The ICWD was formed in 1980. Its mission is to monitor the Owens Valley environment, manage and protect the valley's water resources, conduct research, and educate the public on Inyo County water issues.

The purpose of this newsletter is to provide information on ICWD activities and Owens Valley water issues, and on other Inyo County and Eastern Sierra water issues.

Department Director: Greg James

If you have comments on the newsletter or would like to be put on the mailing list, write:

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Or call: (760) 872-1168
<http://www.sdsc.edu/Inyo/inyohpg.htm>

Judge rules in Bishop Cone pumping litigation

An Inyo County Superior Court judge has found the City of Los Angeles and its Department of Water and Power not guilty of contempt of court in a year-old case concerning the Hillside Decree.

In 1997, local resident Stan Matlick filed a lawsuit, asking the court to find the City of Los Angeles in contempt for violating terms of the Hillside Decree. The Hillside Decree, a 1940 court judgment, prohibits LADWP from pumping groundwater for export from the Bishop Cone, an area from west of Bishop to near Keough's.

The Hillside Decree arose out of litigation between property owners in the Bishop area and Los Angeles in the drought years of the 1920s and 1930s. The residents sought monetary damage from Los Angeles because the city's groundwater pumping caused local pastures to dry up. The state Supreme Court ordered Los Angeles to pay damages, but instead Los Angeles entered into a settlement agreement, the Hillside Decree. Under that stipulated judgment, Los Angeles is prohibited from pumping groundwater for export from the Bishop Cone.

In his decision, filed May 4, Judge Robert Young, who is sitting in the local court by assignment, found the Hillside Decree ambiguous, especially in terms of what facts or circumstances would violate the decree. However, in Young's words, the court cannot "...say beyond a reasonable doubt that respondent Department of Water and Power is in contempt of the 1940 Hillside Decree."

The court found that "...the Hillside Decree does not restrict the...right to transport ground water from an area of the Bishop Cone to another area thereof—so long as the pumped water is used beneficially on the Bishop Cone." However, the court noted that its conclusion is based on the contempt proceeding under consideration, which must be adjudicated as a quasi-criminal affair. If the case were instead a civil case seeking declaratory relief, the court said that it would likely interpret the decree to "limit the distribution of any pumped waters within the Bishop Cone to the areas immediately over-lying the aquifers from which the waters are pumped..." and then only if "irretrievably necessary" for beneficial uses.

Judge Young's decision stated that LADWP said that some of its irrigated Bishop Cone lands lie "upstream" from existing wells, and LADWP might sink new wells at higher elevations, and use the groundwater to irrigate the upper lands while exporting the surface water previously used for irrigation to Los Angeles.

The court said the Hillside Decree "clearly proscribes (this practice). Ground water is to be retained and used within the Bishop Cone for the benefit of the underlying lands within the Cone. Trade-offs and substitutes of surface water are not permitted." With regard to potential new LADWP wells on the Bishop Cone, — the court concluded "Therefore, we would discourage the Department of Water and Power, without further clarification or amendment of the Hillside Decree, from sinking new wells in the upper region of the Cone."

Glenn Singley, LADWP's Northern Dis-

trict engineer, issued a press release in response to Judge Young's ruling, stating that any LADWP Bishop Cone groundwater wells will be only used to supply water for "beneficial use on the Bishop Cone."

On May 11, Los Angeles sent a letter to Judge Young asking for clarification of two parts of his decision. Assistant City Attorney Arthur Walsh asked the court to make it clear that LADWP could sink new wells on the cone if it does not export the groundwater thus produced.

"This in turn will allow the City to take the surface water, to which it holds unfettered rights, and use that water off the Bishop Cone for beneficial purpose," Walsh said. LADWP would then use water from the new wells to irrigate its Cone lands, replacing surface water now used there.

Matlick's attorney, Barrett McInerney, replied to Judge Young on May 13, asking for modification of the judgment. "...to ensure that this action will not merely be the first in a series of sequential lawsuits....Matlick encourages the Court to further clarify its decision...to hopefully avoid any future ambiguity." The reply asked for "...very precise directive language identifying with specificity the constraints on future groundwater pumping activities..." The reason, McInerney continued, was that LADWP would sink new wells to allow export of all surface water traditionally used for irrigation on the Cone. "In what reality was this approach 'the status quo as it existed during the course of the Hillside litigation,'" he asked.

Judge Young responded on June 1 with a three-page answer to both parties. He stated that "The decree allows water extracted by the wells to be transported anywhere on the cone, so long as it is for beneficial use on the cone. I can't make it say anything else..."

He reiterated his conclusion that "drilling of additional wells on the upper regions of the cone would violate the decree if, as (Matlick) asserts, the area is 'awash' with surface water, and hence use of ground water is not necessary for the beneficial use of the lands upon the Cone. This drilling would disturb the status quo which the Decree sought to maintain. Any discontinuance of the traditional use of surface water as it existed at the inception of the Decree...is, in my opinion, violative of the Decree, if the result is to make additional water available (for export)."

On June 24, the city of Los Angeles filed an appeal of Judge Young's decision.

Under provisions of the Inyo County/LA long-term water agreement, groundwater pumping on the Cone must be in strict adherence to the provisions of the Hillside Decree. In other words, whatever the courts say the Hillside Decree means, that's what the agreement requires.

Young's decision noted that the long-term water agreement is "well and thoroughly thought out...which, if appropriately implemented, protects the interest of all parties in the allocation and use of ground and surface water...."

Lewis gets money for Lower Owens, eliminates county debt for project

Congressman Jerry Lewis recently secured \$3.5 million for the Lower Owens River Project (LORP). These funds, together with \$550,000 Lewis obtained during the past two years, eliminate Inyo County's financial commitment for the LORP.

The Inyo County/Los Angeles long-term water agreement requires the county to reimburse Los Angeles for one-half of the cost of planning and implementing the LORP, up to \$3.75 million. Any outside funding the county obtains for the LORP will be applied to the county's share of the project cost, reducing its financial obligation. If the county were unable to secure outside funding, it would reimburse Los Angeles through annual payments of \$300,000, beginning once the project is fully implemented.

Lewis, chairman of the House VA-HUD Appropriations Subcommittee, included the \$3.5 million in legislation he authored providing funding through the Environmental Protection Agency, the Department of Housing and Urban Development, and other federal agencies. The measure passed the subcommittee on June 18. It is expected to move through Congress this summer and to reach President Clinton's desk in August or September for final approval.

The LORP, a joint effort of Inyo County and the Los Angeles Department of Water and Power, would restore a permanent flow to approximately 60 miles of the Owens River immediately below the point where it was diverted to the Los Angeles Aqueduct in 1912. The project includes a permanent water supply for several off-river lakes and two waterfowl and shorebird habitat areas. Water releases to the Lower Owens River are expected to begin in mid-2003. Supplies to the habitat areas could start as early as the year 2000.

Standing Committee acts on LA/Inyo studies, pumping plan, LORP funds

In addition to the town water systems and Olancho and Owens Lake groundwater pumping proposals reported elsewhere in this *Water Reporter*, the Inyo County/Los Angeles Standing Committee considered a host of technical reports and issues at its June 4 meeting in Bishop.

Owens Valley pumping plan

The forecasted runoff from April 1, 1998–March 31, 1999 is 152 percent of normal. Inyo County and Los Angeles agreed that during this period LADWP groundwater pumping will be approximately 64,000 acre-feet. Given this conservative pumping rate, groundwater levels throughout the valley are expected to continue to recover during the year. The pumping program is in keeping with the Drought Recovery Policy adopted by the Standing Committee in 1990, which remains in effect.

Most in-valley uses will receive full water allotments. LADWP alfalfa and improved pasture leases will receive the normal five acre-feet per acre, while native pasture will receive the normal three acre-feet.

Cooperative studies

It has been nearly a decade since the Inyo County Water Department and LADWP developed techniques for groundwater and vegetation management and put them into practice in the Owens Valley. The Technical Group reported to the Standing Committee that there is a need to design and conduct new studies over the next three to five years. Potential study topics include:

- the relation between vegetation change and fluctuating water tables;
- improved tools and models to predict groundwater changes due to pumping;
- incorporating water table depth in the management of groundwater pumping;
- the management of pumping from confined or deep-aquifer wells;
- water supplies for enhancement/mitigation;
- water management in the Laws area.

The Standing Committee directed the Technical Group to identify and design recommended cooperative studies and to devel-

op a conservative management program that will control pumping while the studies are being conducted over a three- to five-year period. The Technical Group is to bring these proposals back to the Standing Committee for consideration in the fall.

Aerial photo study and Type E vegetation

The Standing Committee directed the Technical Group to manage two new projects as cooperative studies: an air-photo interpretation and the development of baseline conditions for irrigated pastures in the valley (this "Type E Vegetation" is identified in the Inyo County/Los Angeles long-term water agreement). LADWP will fund contracts for consultants to conduct the studies and will administer the air-photo study. Inyo County will administer the Type E vegetation study.

Lower Owens River funding

Through the assistance of Congressman Jerry Lewis, Inyo County received a \$250,000 grant from the U.S. Department of Housing and Urban Development for planning and design of the Lower Owens River Project. The Standing Committee agreed that the grant will be used to retain the services of a consultant to assist in the preparation of environmental documentation required for the project. A portion of the funds could also be applied to additional costs as agreed by the Technical Group.

Big Pine Ditch System

The Standing Committee approved procedures and guidelines for implementing the Big Pine Ditch System. An organization or entity to plan, construct, operate and maintain the ditch system must be in place — with plans and a budget — by June 15, 1999. If Big Pine does not meet this deadline, the \$100,000 from LADWP for the community to implement the ditch system will be used for other community uses. The water agreement says that LADWP will provide 6 cubic feet per second of water to supply the system. Under the adopted guidelines and procedures, construction of the ditch system could begin in less than two years.

Water Reporter

Inyo County Water Department

Volume 10 Number 2

July 1997

Court discharges writ; Inyo, LA put water agreement in high gear

■ Decision ends 25 years of litigation, secures environmental protections

The long-term water management agreement between Inyo County and Los Angeles is now a reality.

After more than 25 years of litigation and a lot of hard work by many people — local citizens, interest groups, and government agencies — it came down to a single sentence:

"Good cause appearing therefor, the peremptory writ of mandate issued August 6, 1973 is discharged."

With that sentence late last spring, the Third District Court of Appeal in Sacramento ended litigation between Inyo and LA over the environmental effects of groundwater pumping to supply Los Angeles' second aqueduct. The end of environmental litigation allowed the entry of the long-term water agreement as a binding judgment of the Inyo County Superior Court. The entry of the judgment became final on June 13.

The court's historic order also puts into effect the Memorandum of Understanding (MOU) among Inyo, LA, two state agencies and two environmental groups. The MOU resolved the disagreement of these parties over the 1991 environmental impact report (EIR) that described the long-term agreement and LA's water practices from 1970-1990.

The end of the litigation clears the way for full implementation of the long-term agreement (see page 2), the provisions of the

MOU (see page 3), and the mitigation measures described in the EIR (see page 3). These activities — delayed during the appellate court litigation — will begin immediately, according to timetables in each of those documents.

The Inyo County Water Department will be involved in many of these activities, including rewatering the Owens River below the Los Angeles aqueduct intake, undertaking scientific studies and evaluations, implementing mitigation measures, and continuing to improve water management to protect the environment of the Owens Valley.

The now-settled litigation first arose in 1972, when the county sued the city over its groundwater pumping. In 1991, the county and the city approved the long-term water agreement and the accompanying EIR. The EIR was submitted to the appellate court along with a request that the court end the groundwater litigation between the parties. However, several entities and one individual expressed concerns to the court over the adequacy of the EIR. Over the last five years, the county facilitated settlement discussions over the EIR issues. Early in the process, a settlement was reached with the Owens Valley Indian Water Commission, which withdrew its objections to the EIR's adequacy.

The remaining six entities reached settlement — the MOU — last January. The six are the California Department of Fish and Game, the California State Lands Commission, the Sierra Club, the Owens Valley Committee, the City of Los Angeles and Inyo County. The appellate court's order, which became final on June 2, 1997, granted a motion by Inyo and LA to end the litigation based upon the MOU.

1997-98 pumping program

The Inyo County/Los Angeles Technical Group has agreed to a groundwater pumping limit of 70,000 acre-feet for the 1997-98 runoff year (April 1997-March 1998). The Technical Group will recommend this pumping amount to the Inyo County/Los Angeles Standing Committee at the committee's next meeting.

Of the 70,000 acre-feet that DWP may pump in the Owens Valley, approximately 56,000 acre-feet will supply three uses:

- the Fish Springs and Blackrock fish hatcheries;
- in-valley uses and enhancement/mitigation (E/M) projects that can only be supplied with pumped groundwater; and
- irrigation needs on the Bishop Cone.

The remaining 14,000 acre-feet of water will be pumped to supply the rest of the E/M projects in the valley. Water supplied to the fish hatcheries and any water pumped to replace water supplied to E/M projects will either supply other in-valley uses or will be exported.



Darrell Deppert, of Ecosystem Sciences, snorkels to study fish habitat along the Owens River near Manzanar last week. The dive was part of ongoing research to determine how to create a healthy riparian environment.

Lower Owens River restoration continues

A centerpiece of environmental restoration efforts in Owens Valley is the rewatering of the Lower Owens River. Settlement of litigation between Inyo County and Los Angeles puts the Lower Owens project on a timetable that will begin sending water to the river within the next six years. The project will reestablish continuous flows in the 60-mile stretch of river from the LA Aqueduct intake south of Big Pine to just north of Owens Dry Lake. It will create healthy river

and wetland ecosystems and increase recreational uses, especially warm-water fishing.

The Lower Owens project involves four key physical features:

- 1) A river with continuous flows of about 40 cubic feet per second (cfs) and seasonal habitat flows up to about 200 cfs;
- 2) A 1,500-acre wetland just west of the river near Blackrock, suitable for resident and migratory waterfowl and native species;

See Lower Owens, page 4

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Water agreement programs ready for action

■ Focus on environmental protections, financial assistance

The long-term water agreement guides much of the environmental protection, restoration and mitigation both planned and under way in the Owens Valley. Approved by Inyo County and Los Angeles in 1991 as the "Long Term Groundwater Management Plan for Owens Valley and Inyo County," it describes broad goals and specific programs, and is not limited to groundwater management. Settlement of litigation between the county and the city clears the way for all provisions of the agreement to go into effect.

The overriding goal of the agreement is **environmental protection**. Scientific water management in the Owens Valley is designed to achieve this goal by protecting groundwater-dependent vegetation and rare and endangered species. **Monitoring and management** of vegetation, groundwater levels, soil water and groundwater pumping are at the heart of this effort. The Inyo County Water Department's technical staff independently — and jointly with DWP — conducts this monitoring program. Inyo and LA use this information to adaptively manage DWP's pumping and other water operations in the valley: what scientists see in the field determines evolving management strategies, based upon the goals of the agreement.

The long-term water agreement contains another key component of environmental protection: **mitigation**. If adverse environmental impacts are projected in an area due to pumping, pumps will be turned off in that area to prevent damage. If a significant impact occurs, within 12 months DWP must begin a mitigation plan for the site, developed with the county.

While Inyo and LA have been following these practices since 1989, the settlement of the litigation now puts other aspects of the agreement into effect. These include:

Saltcedar control

DWP will provide \$750,000 to Inyo for an initial three-year saltcedar control effort (1997–1999) and \$50,000 per year to continue the program thereafter. Since 1994, water department staff have tested methods to halt the spread of saltcedar (*Tamarix ramosissi-*

ma). A mix of cutting and herbicide spraying has kept saltcedar in check at several Owens Valley sites and taught the staff much about the control of this tenacious weed that can replace native vegetation. The focus of the expanded control effort will most likely be on eliminating saltcedar from environmentally sensitive areas, especially at springs and along creeks and the Owens River. The water department is in the process of putting a team together and establishing a work program to begin this fall.

Parks

Los Angeles will pay the county \$2 million over the next 10 years to upgrade parks and recreational facilities and \$100,000 each year to maintain these facilities. It will pay the City of Bishop more than \$125,000 each year for parks as well.

Haiwee Reservoir recreation plan

Inyo and DWP will develop and implement a recreation plan for the Haiwee reservoirs. DWP opened South Haiwee for public fishing in 1993.

New wells

The agreement allows DWP to construct new wells and new recharge facilities. All such wells must be constructed and operated according to the provisions of the agreement and must comply with the California Environmental Quality Act.

Dispute resolution

Disagreements between Inyo and DWP will be handled by binding dispute resolution. Inyo County Superior Court, under expedited procedures, will make a final judgment in unresolved disputes.

Other continuing programs of the agreement include:

Financial assistance

Inyo County will continue to receive more than \$2 million each year from DWP to

implement and enforce the agreement and to offset losses to the county tax base caused by LA's ownership of valley land.

Bishop Cone

The agreement requires that groundwater pumping on the Cone must adhere to the Hillside Decree. The agreement provides additional environmental protections on the Cone.

Additional provisions

The water agreement confirms that DWP lands that have been irrigated, and other in-valley uses that have received DWP water since 1981, will continue to receive water. Existing enhancement/mitigation projects will also continue. The agreement prohibits groundwater mining, construction of additional LA aqueducts, and increases in existing aqueduct capacity. It describes the Lower Owens River Project that benefits the environment and recreation. And, regardless of changes in LA's other water sources, the agreement will not end.

■ Local towns to see changes in water systems, land sales

The agreement includes provisions for transferring the water systems of Owens Valley towns from DWP to local control, funding a ditch system for Big Pine, and releasing DWP land near valley communities. The county Board of Supervisors recently designated county Special Projects Coordinator Brad Mettam to guide these new projects.

"It will be up to the communities to make the decisions about these projects," Mettam said. "My task is to help guide the process, set up public meetings, and help people work together and stay focused."

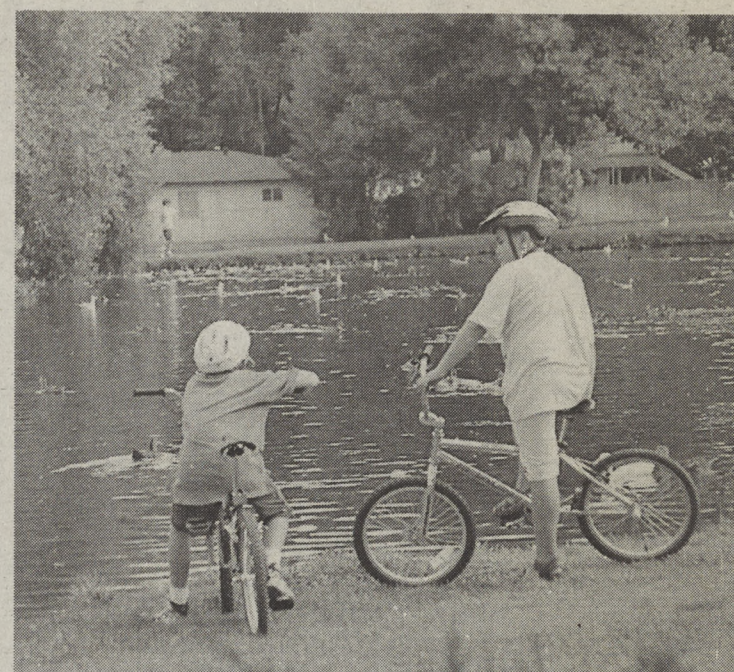
The county board will consider a final budget for Mettam's work on Aug. 15. Prior to that, he will be meeting with individual supervisors to discuss concerns in each community.

The water agreement sets out guidelines for each of these important projects:

Town water systems

Water systems for Lone Pine, Independence and Laws will return to local control by 2002, after DWP upgrades each system. For instance, DWP must replace the Lone Pine reservoir and improve the Independence reservoir as needed. In the meantime, the county and each town must decide who will operate and maintain each system and create agencies to do that. Mettam will begin researching different ways this can be accomplished, including a review of the local operation of the Big Pine water system.

After lease/purchases of the water systems are completed five years from now, DWP will continue to supply free water to the systems (up to specified amounts) and maintain water supply wells and pumps.



Inyo County and Bishop city parks and recreation facilities come in for substantial financial assistance because of the agreement.

Big Pine ditch

DWP will provide up to 6 cfs of water and up to \$100,000 to a Big Pine organization to rebuild its ditch system. Construction must begin by June 1999. The Big Pine organization may also use the money on other projects subject to Inyo County and DWP approval.

LA-owned land

Los Angeles will sell 75 acres of its land near Owens Valley towns for public and private development. Lands in addition to the initial 75 acres may be made available in the future to meet needs near valley towns and for parks or other public purposes. The land releases will be subject to the California Environmental Quality Act.

The success of these three projects will depend on the interest and activism of community residents.

"One challenge will be for the people of each town to develop a vision of where they want their community to go, then decide what will help them achieve those goals," Mettam said.

OWENS VALLEY Water Reporter

Produced by the Inyo County Water Department (ICWD), Bishop, California, and distributed in local newspapers.

The ICWD was formed in 1980. Its mission is to monitor the Owens Valley environment, manage and protect the valley's water resources, conduct research, and educate the public on Inyo County water issues.

The purpose of this newsletter is to provide information on ICWD activities and Owens Valley water issues, and on other Inyo County and Eastern Sierra water issues.

Department Director: Greg James

If you have comments on the newsletter or would like to be put on the mailing list, write:

Inyo County Water Department,
163 May Street, Bishop, CA 93514.
Or call: (760) 872-1168

<http://www.sdsc.edu/Inyo/inyohpg.htm>

MOU: New environmental benefits for Owens Valley

The Memorandum of Understanding calls for a number of projects and studies that will result in tangible environmental benefits in the Owens Valley. It developed during five years of negotiations over the legal adequacy of an environmental impact report describing the long-term agreement and Los Angeles' water practices in Owens Valley from 1970-1990. Agreed to last January by Inyo County, Los Angeles, the state Department of Fish and Game, the State Lands Commission, the Sierra Club, and the Owens Valley Committee, the MOU requires numerous projects, studies and financial arrangements, described below.

Lower Owens River Project

The MOU sets goals, implementation schedules, and water supply commitments for the Lower Owens River Project. By 2003, DWP will begin releasing permanent flows to the Lower Owens River and will establish and maintain lakes and wetlands in Southern Owens Valley. (See story, page 1.)

Yellow-billed Cuckoo habitat

By 2000, consultants for Inyo and DWP

will evaluate Yellow-billed Cuckoo habitat at Hogback and Baker creeks. The consultants will develop habitat enhancement plans, if warranted, with input from the lessees for the areas and the parties to the MOU. Resulting projects will begin as quickly as possible after the plans are completed.

Additional mitigation

DWP will supply 1,600 acre-feet of water per year to establish and maintain on-site mitigation at Hines Spring and to restore, enhance, or create other wetlands in the valley. DWP must implement these measures by 2000.

Owens Valley management plans

DWP will develop management plans for those areas of LA-owned land where there are problems caused by livestock grazing and other land uses. Priority for plan development will be given to riparian areas, irrigated meadows, and sensitive plant and animal habitats. The plans will promote biodiversity and a healthy ecosystem and will consider the enhancement of habitats for

threatened and endangered species. Management plans will allow for the continuation of sustainable uses, like recreation, livestock grazing, agriculture and other activities. The planning effort will be conducted in accordance with the California Environmental Quality Act and must be started by 2002. The plans will be completed in about 2007.

Mitigation plans for impacts in the EIR

By mid-1998, Inyo and DWP must complete mitigation plans for impacts identified in the 1991 EIR. The MOU establishes goals for revegetation with native Owens Valley plants. (See story, below, for details.)

Aerial photo analysis

Inyo and LA will retain experts in aerial photography interpretation to determine if air photos or remote sensing technology can be used to improve management under the long-term water agreement. If the consultant recommends cost-effective monitoring techniques, the recommendations will be implemented. The study will be completed by 2000.

Biological inventories

Inyo, DWP and consultants for the two will inventory plants and animals at springs and seeps throughout the Owens Valley by 2000. Also by 2000, the two agencies must develop baseline conditions for vegetation classified as "Type E" (supported by water supplied by DWP). The information gathered during both of these studies will be incorporated into the management of groundwater pumping under the water agreement.

While Los Angeles and Inyo County are responsible for meeting the requirements of the MOU, all of the parties to the MOU will oversee its implementation. Meeting as an ad hoc "MOU Steering Committee," these parties have already reviewed two draft technical reports from the Lower Owens River Project consultants. The steering committee will schedule another meeting following a survey of river users under way this month.

EIR mitigation plans due next year

Settlement of the litigation between Inyo County and Los Angeles means the mitigation measures in the 1991 environmental impact report describing LA's second aqueduct operations will now be fully implemented. That EIR contains mitigations for LA Department of Water and Power (DWP) practices from 1970-1990, including groundwater pumping and abandonment of agricultural lands.

DWP has already completed some of the EIR's mitigation measures as part of previously approved enhancement/mitigation projects (covering about 1,600 acres). Now that the appellate court has accepted the EIR, Inyo and LA will begin to implement the remaining mitigation measures described in the EIR. Those efforts will cover an additional total of approximately 1,500 acres.

The EIR requires establishment of irrigated pasture and native plants in affected areas from north of Laws to south of Independence. Irrigated pasture or native plants will be established on damaged lands adjacent to both Independence and Big Pine (30 acres at each location). Native plants will be established on over 80 acres in the Taboose Creek/Blackrock area, on over 60 acres south of Mazourka Canyon Road near Independence, two acres at Hines Spring, 120 acres south and east of Bishop, at least 440 acres in the Laws area,

and 180 acres near the town of Big Pine. Final acreage at each site depends on ground surveys, which will delineate exact impact area boundaries.

The EIR identifies an additional 640 acres in the Laws area as having low-density vegetation cover. Although this impact was not necessarily caused by DWP's practices since 1970, Inyo and LA will consider these acres for mitigation.

The Inyo County Water Department will be working with DWP during the fall and winter to develop mitigation plans for these revegetation areas. The MOU (see story, above) guides the revegetation effort and requires that the plans be completed by mid-1998.

The EIR also identifies the Lower Owens River Project as a valley-wide mitigation measure, subject to a separate timetable.



In 1991, water department staff planted native seedlings on abandoned farm land near Laws (left). By this summer, significant growth had occurred (above). The test plot is showing how different techniques affect revegetation attempts using native Owens Valley plants.

Financial terms of MOU, agreement

Inyo County and City of Bishop will receive

<u>Annual payments to:</u>	<u>Amount received:</u>
County general fund	\$ 1.4 million
County Water Dept	\$ 900,000
Parks maintenance	\$ 100,000
City of Bishop	\$ 125,000
Saltcedar control	\$ 50,000
Annual total	\$ 2.6 million

<u>Other payments to:</u>	<u>Amount received:</u>
Parks rehabilitation	\$ 2 million
Saltcedar control	\$ 750,000
Big Pine ditch system	\$ 100,000

Total received by Inyo and Bishop over 18.5 years **\$ 49 million**

Inyo County will pay

<u>Annual payments to:</u>	<u>Amount paid:</u>
Lower Owens River Project	\$ 300,000
	Total county obligation of \$3.75 million may be reduced by federal, state or private funds.

Maximum payments **\$ 3.75 million**

<u>Additional payments:</u>	<u>Amount paid:</u>
MOU professional services	
Sierra Club	\$ 53,000
Owens Valley Committee	\$ 30,000
Total paid by Inyo over 18.5 years	\$ 3.83 million

Lower Owens, from page 1

3) A 325-acre wetland at the delta where the river enters Owens Dry Lake, suitable for waterfowl, shorebirds and other animals, maintained by flows of about 6-9 cfs; and

4) Off-river lakes and ponds, maintained or established for recreational fishing, birds and other wildlife.

The project will take some Owens River water that now flows into the LA Aqueduct and instead send it down the Lower Owens River, sustaining complex river and riparian ecosystems and recreation uses. After it has done this job, much of the water will be pumped back out of the river and into the LA Aqueduct from a point just north of Owens Dry Lake. Between six and nine cfs of water will be allowed to flow past the pumpback station to sustain the Owens Lake delta habitat.

The pumpback facility is scheduled for construction beginning in 2001. Non-river-channel elements of the project are also slated to begin in 2001. The base flow of 40 cfs and other river-channel efforts must begin no later than 2003.

Behind the four project features are a host of scientific studies, habitat improvements, and recreation decisions, some of which are ongoing and others that are not yet begun. However, even before the Third District Court of Appeals ended the litigation between Inyo County and Los Angeles, the two agencies had already laid the groundwork for the Lower Owens River Project.

For instance, in the summer of 1993 the agencies — in cooperation with the state Department of Fish and Game — conducted flow studies in the Lower Owens River. Taking advantage of a high runoff year, the Los Angeles Department of Water and Power (DWP) released increasing amounts of water from the aqueduct into the river channel. Resulting data on flows, temperature, turbidity and stream-bed profiles will be used to structure the rewatering in a way that optimizes for the greatest number of resources.

The consultants who conducted the analysis looked at the flow-study data and produced a series of recommendations that became the blueprints for the Lower Owens River Project. Since then, they have collected additional data to fill in some information gaps, especially concerning the Blackrock wetlands portion of the project, where they developed contour maps to predict the extent of wetland habitat.

DWP retained a respected consultant, Ecosystem Sciences, of Boise, Ida., with approval from the other parties to the MOU, to plan the Lower Owens River Project. Ecosystem Sciences analyzed the flow study data and recently prepared two draft technical memos for the project. One, "Hydrologic Plan for Implementing Initial Maximum and

Minimum River Flows," recommends strategies for establishing flows in the Lower Owens during the first three years of the project. The second report, "Initiation of Resource User Group/Recreation Plan—LORP," describes a survey about the river that the consultant is conducting this month. The technical memos are available at the water department and DWP offices, and on the water department homepage at <http://www.sdsc.edu/Inyo/inyohpg.htm>

A draft environmental impact report describing the project, its potential impacts, and mitigation measures is due in three years. The draft EIR will be subject to public review and comment before a final EIR is completed a year later.

Prior to that, Ecosystem Sciences will complete numerous technical reports and plans, the building blocks of the draft EIR. Four key draft plans are due by the end of the year, including: a management plan for the river-riparian ecosystem; a recreation plan; a wildlife and wetlands management plan; and a habitat conservation plan. A draft long-term monitoring and reporting plan is due in late 1998. Final versions of these plans and a land management plan are due

by the end of 1998. In preparing the plans, the consultants will confer with the parties to the MOU, government agencies, ranch lessees, and the public.

Another important ongoing activity is a study of site alternatives for the pumpback system. The U.S. Bureau of Reclamation will survey potential sites for the facility and prepare a conceptual design by late 1997.

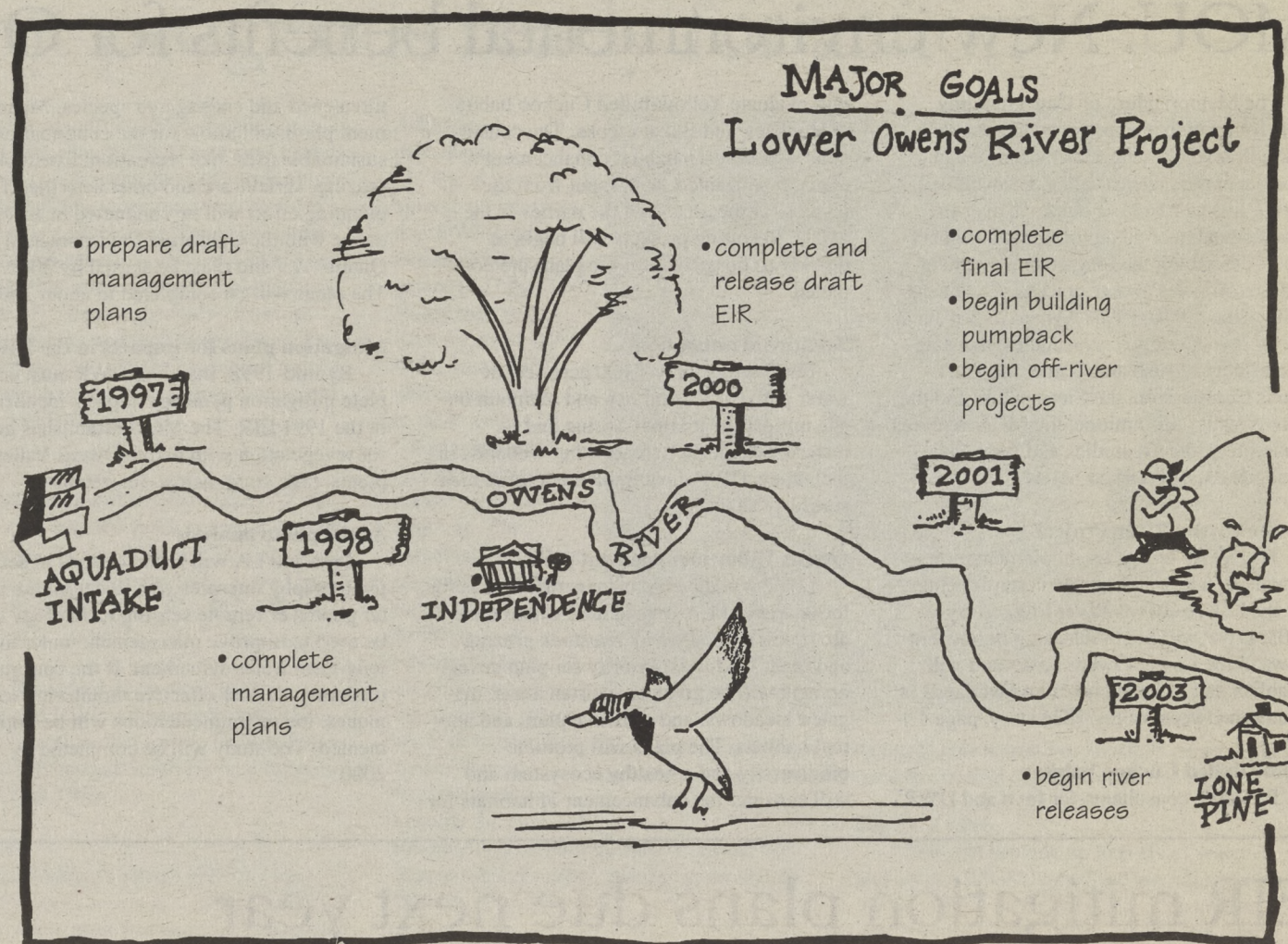
The bureau's work this year, and the final construction plans it will prepare in 1998, amount to about \$200,000 worth of work paid for by a grant. That amount goes toward Inyo County's obligation to the project of up to \$3.75 million and hints at the type of cooperation and grant funding that could significantly reduce the county's payments for the project.

Consultant interviews local citizens

How is the Lower Owens River used today? How might it be used in the future? Are there any conflicts between Lower Owens user groups? What concerns exist about the future of the Lower Owens?

Ecosystem Sciences is contacting numerous local groups, individuals and agencies this month to begin to answer those questions. The survey will be used to develop a recreation plan for the Lower Owens River ecosystem. It will also serve to identify and recommend possible changes in current use, to develop a monitoring program and mitigation plan, and to begin involvement in the project.

The consultant is surveying numerous local recreation and environmental groups, civic and business organizations, visitors centers, tribal governments, interested individuals and local experts.



A first-hand look at fish habitat

Scientists donned snorkeling gear last week to try to unravel some mysteries about local native fish and game fish populations.

Mark Hill, of Ecosystem Sciences, said the underwater look at the Lower Owens River gave them some ideas about the habitat needs of bass and of native Owens pupfish, Owens tui chub, and Owens speckled dace. This will help Hill and others identify ways to develop a warm-water fishery, emphasizing smallmouth bass, while also protecting the native threatened and endangered (T & E) fish species as new flows are established in the Lower Owens ecosystem.

For now, it appears that meeting those two goals will require physically separating the bass from their native fish prey.

"Based on what we saw throughout the river and ponds, the Lower Owens can become an incredible bass fishery," Hill said. "We were surprised to see just how well the bass use the tule beds. It's like a reef system in there, the way they follow deep, wide channels way back into the tules and under cut-banks."

But the mobility of the bass means pupfish and tui chub populations will need off-

river sanctuaries in order to survive, at least early on.

"We'll need to keep them separated from the predators," Hill said. "We did identify many excellent locations for sanctuaries. In time, after the numbers of pupfish and tui chub are up, we could attempt to connect these sanctuaries to the river and allow them to recolonize it."

The dives also took in wetland reaches and backwaters like Lone Pine Pond, Goose Lake, Twin Lakes, and Billy Lake.

"There's no real record yet of the T & E fish in these areas," Hill said. "We also looked at how the pupfish behave at Fish Slough and Warm Springs so we could see how they select for habitat. Are they hiding in the tules? What does their environment look like? If we can answer these questions, we can try to develop habitat for them as part of the Lower Owens River Project."

Hill said the eventual key will likely be habitat diversity. If the project can provide this, including shallow-water spawning grounds and corridors to the river, then the T & E species would have sanctuaries in which to reproduce and river access for migration between the wetlands.

Water Reporter

Inyo County Water Department

Volume 6 Number 1

February 1993

Court retains authority in EIR litigation

An opinion released Jan. 27 by the Third District Court of Appeal injected a new dimension of uncertainty into the year-long effort to reach a settlement in litigation regarding Los Angeles' environmental impact report on groundwater pumping in the Owens Valley.

In its 18-page opinion, the court said it would retain authority to judge the adequacy of the EIR even in the absence of adversity of the plaintiff, Inyo County, in the original EIR litigation. The court said the role of adverse party could be played by "friends of the court," that is, people or organizations who are not parties to the litigation but may provide information or advocate a position to the court.

The court's opinion allows any person or entity who meets certain requirements of the California Environmental Quality Act to apply to appear as a friend of the court by Feb. 27. The court will review the applications, grant friend-of-the-court status to those who qualify, and identify the issues to be discussed in briefs to the court.

The State Department of Fish and Game, the State Lands Commission, the Sierra Club and the Owens Valley Committee are already friends of the court. During the past year, Los Angeles and Inyo County have met with these agencies and organizations to discuss their concerns. Recently, they have made progress. However, since the court opinion was released, the parties have been discussing whether to continue to work on a settlement, and how a settlement should be structured, in light of the views expressed by the court.

Although the court's opinion induced more uncertainty about the possibility of achieving a settlement, a resolution is expected by the end of this month when the court's deadline for submitting friend-of-the-court applications expires.



Owens Valley, south of Big Pine — Enough snow fell in the Owens Valley during the big storms last month to cover the desert for weeks. Even more piled up in the mountains. Los Angeles says the Feb. 1 snowpack at Mammoth measured 173 percent of normal for this time of year. Owens Valley received from 149 to 189 percent of normal precipitation for this time of year.

DWP personnel changes affect northern district office in Bishop

The Los Angeles Department of Water and Power is experiencing personnel changes, many of them at the northern district office in Bishop.

Dennis Williams, who has been with LADWP for 28 years and manager of the aqueduct division since December 1989, will make a lateral move March 1 to become manager of the general services division.

The current general services manager, Joe Hegenbart, has been promoted to be an assistant to Jim Wickser, who is the assistant general manager-water.

General services is in charge of support activities for both the water and power systems, including purchase and maintenance of vehicles and all types of maintenance and construction from air conditioning to electrical to landscaping. Williams will supervise 1,450 employees.

As manager of the aqueduct division, Williams has been in charge of 275 employees, including 190 employees in Inyo and Mono counties. The division is

responsible for operation of the Los Angeles Aqueduct system, including several large reservoirs such as Grant Lake and Crowley Lake in Mono County, and management of all LADWP lands in Inyo and Mono counties.

Williams has been intimately involved in Inyo and Mono issues, such as the Los Angeles/Inyo water agreement, Mono Basin creeks restoration, and Owens Lake.

Henry Venegas will replace Williams as manager of the aqueduct division. Venegas currently is manager of the water operating division, responsible for all of the water distribution facilities, including 7,000 miles of pipeline.

Glenn Singley is the new northern district engineer (see interview with Singley, pages 2-3). He replaces Bob Wilson, who retired Feb. 1 after 32 years with LADWP.

Russ Rawson, with the department for 31 years (27 of them in Inyo County) also retired, last spring. He was in charge of land and water use, range and wildlife. Lloyd Anderson, who was promoted from associate engineer to water works engineer, replaces Rawson.

Gene Coufal, who has served on the Inyo/Los Angeles Technical Group, transferred to Bishop from Los Angeles last year as a water works engineer.

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To DWP's Glenn Singley, building trust is essential

Glenn Singley is the Los Angeles Department of Water and Power's new northern district engineer for the aqueduct division in the Eastern Sierra. He accepted the position in November 1992, when Bob Wilson retired.

Singley, 38, said he has long been interested in water resources. After growing up in Sacramento, he pursued that interest by obtaining a bachelor's and a master's degree in civil engineering from Brigham Young University. Upon graduating in 1981, he went straight to work for DWP in July of that year.

After 10 years of working in different divisions of the department in Los Angeles, Singley was relocated to Bishop with his wife and five children. So far, he said they are happy with their new home.

"We love it," Singley said. "We're really enjoying the community, enjoying Bishop."

In this interview, Singley shares his past experiences with DWP, and his thoughts on his new job, on issues facing DWP, and on working with Inyo County on water management.

Water Reporter: What did you do for DWP before coming here?

Glenn Singley: I began in Los Angeles in the planning section, water engineering design division, working with some conservation issues, water reclamation, and doing environmental documentation — EIRs and negative declarations.

I moved from there to construction of the filtration plant in Sylmar, that I think a lot of people have seen. All of the aqueduct water goes through that filtration plant. So I worked on that for a couple of years.

I moved from there back over to the planning section and worked on our Urban Water Management Plan. There was a statewide requirement that all municipalities come up with a plan that basically deals with conservation and sources of water into the future. That was our first attempt at that, and that's a recurring plan that gets updated every five years.

I also worked on San Fernando Groundwater Basin contamination cleanup — we had a Superfund project that I began working on after I left the planning section.

WR: When did you come to Bishop?

Singley: I came to Bishop in July of 1991. That was after having worked in the aqueduct division in Los Angeles, working for about three years on Mono Basin issues, from 1988 to 1991. I was involved in working with the state [Water Resources Control] board in initiating the environmental impact report for the Basin that's being prepared now, and working with the stream restoration as it began.

WR: You were supervising? Or what was your role?

Singley: I was supervising the group that was focused on the Mono Basin. So I was the head of the Mono Basin studies.

WR: Which group was that?

Singley: Well, we were the group from the Department of Water and Power that was coordinating the department's work. We've always been part of the process and included

in the restoration technical committee that's now doing the work on the restoration of the streams.

WR: Do you plan to keep working on Mono Basin issues?

Singley: Well, it's still handled for the most part from Los Angeles because some of the attorneys involved are down there and our consultants work with those people in Los Angeles. So, it's more of a coordination effort for me now.

WR: Were you involved in any other Eastern Sierra issues before becoming northern district engineer?

Singley: Generally, I was just getting acquainted with other Owens Valley and Mono Basin issues from July of 1991 through November of 1992. I hadn't been involved in other issues until I came up here. Then I tried to lengthen my work as far as understanding all of the Owens Valley issues: the agreement, and Indian affairs — we've several things going on there — some of the grazing and ranching policies, our land management issues, and then basic operation and maintenance of the aqueduct.

WR: What are your responsibilities now?

Singley: Basically our goals and objectives here are to continue to provide a safe water supply to Los Angeles. But in doing that, we've got several responsibilities up here. We own a lot of property involved with our water gathering activities. So we have a responsibility to be good stewards of our land. A lot of that land is opened up for individual leases and open to the public, so we've got a two-pronged responsibility there in managing our property for those that are leasing it and also a responsibility to the public.

WR: What do you think are the main issues facing DWP, as an agency?

Singley: The agency, as a whole, has to continue to be able to provide, again, a reliable and a safe water supply to the citizens of Los Angeles. And there are several challenges that face us in that regard. One is just quantity of water itself. Different sources of water are coming under closer scrutiny.

WR: Such as?

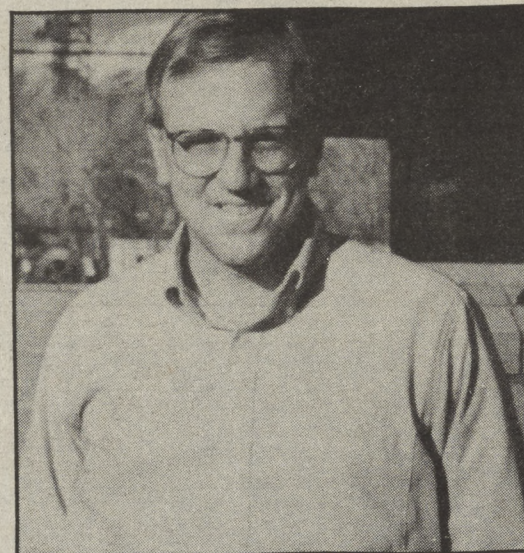
Singley: Such as availability of water from the Mono Basin — how much we need to maintain in the Basin for environmental purposes, for the lake and the surrounding lands. Also, certainly, the pumping in the Owens Valley — the amount that's prudent and would still maintain vegetation in the valley.

Water quality is another big issue. As water quality requirements become more stringent, our efforts become more costly to either filter the water or be very selective in the water sources that we might use.

WR: Would your Eastern Sierra sources be the best quality?

Singley: They certainly are. Traditionally, we used to consider the Eastern Sierra to be 75 percent of our water supply. But with the challenges to our water rights in the Mono Basin and challenges to additional pumping in the Owens Valley, we've had to rely more on other sources.

Our groundwater sources in Los Angeles Basin and the San Fernando Basin itself in the Los Angeles area have traditionally supplied 15 percent of the water supply. But there are some contamination issues that we're facing, and



cleanup problems, so we're not able to use all of the wells that we had access to previously. We're spending a great deal of effort in looking at cleanup of individual wells and the whole basin.

So most of the water that we're picking up that we have lost in, say, the Mono Basin and the Owens Valley is being made up through the California Aqueduct, the State Water Project in Northern California, through the Sacramento Delta.

Those issues are being more and more scrutinized and it's kind of a statewide water supply challenge for water agencies to come up with adequate supply. And I think our emphasis is shifting to increasing importance on conservation, on water

reclamation, and stretching our existing water supplies farther.

WR: Do you think that's where the future lies for DWP's water supply — conservation and reclamation?

Singley: I think that's a big part of it. That's always got to be a component. I think that we've also got to look at additional new supplies where possible and feasible. And I think new supplies are very likely to come from water transfers and moving water around the state.

WR: DWP's been having budgetary problems — how does this affect your operations in the Eastern Sierra?

Singley: Well, they have. We're on a stringent budget. We have had loss of some jobs through attrition, locally, and have not been able to fill to the staffing levels that we have had in the past. We are under scrutiny as far as our day-to-day budget, our capital projects, and even some of our maintenance projects that we've had to trim down because of the financial difficulties they've had in Los Angeles. And it's not unique to DWP. It's certainly being felt by the county and other agencies.

WR: Do you anticipate any more staff or management changes?

Singley: Well, I think we are trying to hold at the levels of the past year. I don't know if, in the future, the revenue picture in Los Angeles will become any brighter.

We may be able to loosen up and proceed with some of the projects that we may have wanted to do in the past that we've had to kind of hold back on. We have just instituted a new rate structure in Los Angeles and we're waiting to see, finally, how that will affect our overall revenue. The aim there is that it would be revenue-neutral and not change the amount of revenue drastically from what we have had in the past. But I think it's going to take some time to go through and work with that new rate system to see exactly what will be available to us.

WR: What's the major change that comes with this new rate structure?

Singley: It's basically gearing our rates toward conservation. They have kind of a two-tiered rate structure where a basic commodity or amount of water allocated for families has been given at a fairly low base rate, but anybody using more water than the average amount is charged a much higher rate. In trying to balance that, we're trying to balance the revenue so that they're not way out of line from our old system. Previously we had a standard base charge that everyone was charged and then, beyond that, people were charged per unit of water used. We've more or less done away with that base charge and everything is charged on a use basis. It's a type of increasing block structure. That's a term many people in the water industry would use, where

'We have a responsibility to be good stewards of our land'

Singley, from page 2

the more water you would use, you're charged more per unit for that water.

WR: [Besides the budget], what challenges do you, as northern district engineer, face in the Eastern Sierra?

Singley: Well, I think first of all, because we are such a large organization there are lots of eyes focused on what we do and how we interact with other agencies, with the public and other communities. I think that it's important that we seek ways to get along with our neighbors and work well with each other. I think it's much more constructive to sit down around a table and try to work things out than to continue to litigate things and simply argue over matters. So I think if there's anything that I can do I want to see if we can't resolve some of our differences around the table rather than fight about them.

WR: Do you think your being selected as the northern district engineer represents a change in direction for DWP?

Singley: That's a hard one to say. I don't think so. I think I have a fairly easy going style and I enjoy working with others and I think that's been important for us, in this time of transition, to have an opportunity to improve relations with the other agencies and the community.

WR: What is your long-term vision of DWP's role, and priorities, in the Eastern Sierra?

Singley: I think we're becoming increasingly conscious of management of our lands, of looking at maintaining the environment, certainly, wherever we're involved. And I've seen a shift in focus in putting more energy into those types of issues.

I think because we're involved in the middle of trying to settle the long-term water agreement and working through the courts, that's going to be an issue that will be with us for some time. But we're anxious to move that process forward and I think we've established a fairly good working relationship with the county to be able to do some good things here.

WR: What is your view of Inyo County's role in water management?

Singley: I take it from the perspective of the agreement. I think Inyo has an integral role in

shaping, and helping us shape what the water picture will be like in the future. The agreement is an historic document, an agreement between these two agencies that we can work together to bring about some common ground in the amount of water that can be exported and the amount of water that needs to remain in the valley for maintaining existing and future vegetation.

WR: How would you describe DWP's relationship with Inyo County, now?

Singley: From my perspective, fairly favorable. I think we work together well on the technical committee level, and I think the Standing Committee for the water agreement has worked together well. I see that continuing and I hope that it improves.

WR: Do you see any problems with DWP and Inyo County's relationship, anything that could be improved?

Singley: I've seen, and what I'm hoping for, is an increasing trust between the agencies by being able to use our own resources to investigate certain matters and being able to exchange information that will be beneficial to both agencies.

I think that we'll be able to do well and as we gain experience working with each other I think that trust will increase.

WR: So you think trust is going to be what keeps these former adversaries

from becoming adversaries again?

Singley: Well, I think so. We're certainly going to proceed cautiously because of our differences in the past. I think that trust will develop and is being developed.

WR: If there is a settlement between Inyo, DWP, the California Department of Fish and Game and the environmental groups, how do you think it will affect DWP's operations in the Owens Valley?

Singley: Well, we've been living under some basic terms of the agreement as far as the amount of pumping we're doing in the valley. So I don't see any drastic changes that way. I think there are some additional studies that need to be done and we'll be working on them. I think bringing in additional environmental groups will be a new wrinkle to

our work. But that's going to happen, and we'll be testing the waters to see just how we will work together.

WR: Do you think the public's attitude toward DWP is changing at all here — becoming more favorable, or less favorable?

Singley: That's a hard one to put a finger on. Generally, in talking to people — in a large group or whatever — I hear the same stories of the department and some of things it has done in the past and the way it went about procuring property and procuring water rights. And, frankly, there were some things that in the past were done in a way that we probably wouldn't think of doing today.

But given the situation, I think everybody has to admit that it was fairly a marvel, the actual construction of the aqueduct and bringing water [to L.A.] at the time period it was done.

There are certainly remnants of feelings of the problems of taking that water to a distant location. But I've also felt the feelings of the benefits that have come because of Los Angeles owning so much of the property and making that property available to the public. I've heard appreciation for the fact that the Owens Valley hasn't been overdeveloped and overrun, that it hasn't become another San Joaquin Valley with a lot of private ranches — you know, KEEP OFF — or large metropolitan areas that could have sprung up. So, I get fairly mixed messages.

Generally, one on one with people, people seem to like to confide in me that they're glad we're here to a large extent because they've been able to maintain the kind of lifestyle they came up here for because it hasn't become overcrowded and overrun.

WR: Was the location a big reason for your accepting this job?

Singley: It certainly had an influence on me to be able to come up and live in a smaller community, and be closer to work.

WR: Do you plan to stick around awhile?

Singley: I would like to stick around as long as I can. It's generally a fixed length of time that I would be up here, and I'm not planning on spending the rest of my career here.

WR: DWP fixes the amount of time?

Singley: Basically. They would probably call me back downtown after a certain amount of years... probably about 10 years. I know Duane Buchholz stayed around for about 10, and Jim Wickser before him for about the same amount of time.

I would hope that I would get the same opportunity.

'I think we're becoming increasingly conscious of . . . maintaining the environment, certainly, wherever we're involved'

OTHER NEWS

SCE ups Bishop Creek flow

Bishop Creek has been flowing faster and higher lately.

Gary Aubrey, manager of Bishop Creek Hydro for Southern California Edison, said SCE has been releasing more water out of South Lake and Sabrina reservoirs. Until March 1, 120 cubic feet per second (cfs) will be coming out of Plant 6 into Bishop Creek, instead of the usual 50 to 60 cfs for this time of year.

"The idea is to get storage capability," Aubrey said. "This is the first time in seven years we've had a good water year, and we expect runoff to be really high. So we're trying to get our lakes down to a minimum level so we won't have to spill and won't lose power generation."

SCE plans to replace a 40-year-old flowline at Plant 5 in March, and so will also

lose power generation there until flows go back up in May.

"So we're getting maximum generation now," Aubrey said.

Wells on for freeze protection

The Los Angeles Department of Water and Power has had to turn on more wells this winter to keep its aqueduct from freezing.

From Dec. 18-21, 16 wells in the Independence-Oak Creek well field and the Symmes-Shepard well field, which were off according to water management policy, were turned on. The wells pumped 406 acre-feet of water into the aqueduct.

From Jan. 5-14, 13 wells in the same areas went on to pump 1,057 acre-feet of water into the aqueduct.

Fred Finkbeiner, LADWP engineering services manager, said the trigger for starting freeze protection is when "the water temperature at the outlet of Haiwee Reservoir and at Alabama Gates gets down around 33 to 34 degrees Fahrenheit."

"Ice crystals start forming on the surface of the water," Finkbeiner said. "As they start collecting, they become very similar to debris in the aqueduct. They will start sticking to the sides of the aqueduct, and dams form. It's a real problem. It could have disastrous effects for the aqueduct — the worst is we could lose the aqueduct."

Because groundwater usually hovers around 60 degrees F., enough of it pumped into the aqueduct will prevent freezing.

LADWP has instituted freeze protection since 1968. The amount pumped for freeze protection doesn't push L.A. over the limit in the annual pumping program.



Freeze — Tinemaha Reservoir

District keeps sting out of valley's watery spots

Mid-summer. It's hard to imagine, this deep into winter, those blistering days and oppressive nights in the Owens Valley. Remembrance of summer nights slumbers briefly in the depths of our thoughts. But even deeper in memory lie recollections of hordes of whining, biting insects plaguing our evenings, our barbecues, our outings, and our livestock.

For almost 10 years, mosquitoes have been a suppressed presence here, their populations controlled by the Owens Valley Mosquito Abatement District (OVMAD). For much of that time, drought has kept portions of the valley drier than they might normally be and the district's work, while consuming, hasn't been overwhelming.

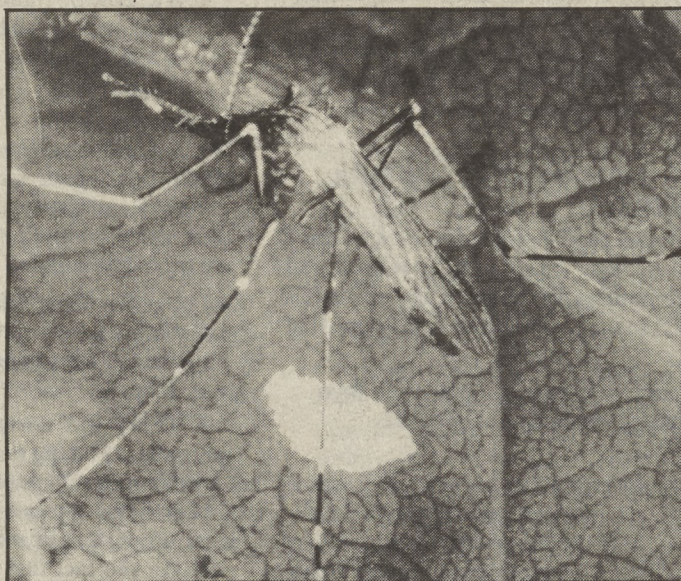
But that might not be the case this year, as precipitation from this winter's storms is expected to cause more runoff to occur in the valley than in the past six years.

While the Inyo County Water Department anticipates the runoff to help soil moisture and provide more water for the plants, the OVMAD is concerned that the extra water will create more wet areas where mosquitoes can breed.

High runoff could cause the Owens River to rise and to flow into old cut-off meanders, or oxbows, where mosquito eggs lie dormant. And, if ranchers get 100 percent of their allotment — something that hasn't occurred for several years of the drought — they will be spreading more water over a larger area, increasing the size of the mosquito source.

The OVMAD is conducting a workshop March 2 in Independence to explain these problems to its board of trustees (the Inyo County Board of Supervisors fills this role). Steve Frederickson, OVMAD manager, said he also intends to seek direction from the board on fulfilling the long-term need for more involvement with other agencies in the valley.

OVMAD, which operates under the Inyo County Environmental Health Department, views mosquitoes as a public health threat because some species are capable of transmitting encephalitis to humans. This view was supported by Inyo County residents in 1985, when they voted to establish a mosquito abatement district.



District operations are funded through service charges levied against properties within the district's boundaries. Frederickson said revenues from the service charges amount to \$165,000. The district permanently employs Frederickson and one other person, plus seasonal help (two people, this year). The district is in charge of 1,700 square miles of territory, from the south edge of Owens Lake up to and including Round Valley and Bishop Creek and Rock Creek recreation areas.

Frederickson said that with such a small crew in charge of such a large territory, the district's quality of mosquito abatement could slip below levels of acceptability unless the district finds a way to deal with increasing mosquito sources in an environmentally sound manner.

One solution is to hire more people to help heft the workload. But more than that must be done, Frederickson said.

For example, he said the district needs to be involved with certain water management decisions made jointly by the Los Angeles Department of Water and Power and the Inyo County Water Department, particularly ones dealing with water projects designed as mitigation for damages caused by past pumping practices by LADWP.

"You want to put more water out and green up the valley, and we think that's fine," he said. "But that is going to increase the sources for mosquitoes to breed."

The county water department and LADWP have formally committed to work with OVMAD on enhancement/mitigation projects, including the lower Owens River project which entails rewatering 60 miles of stream and creating numerous acres of wetlands and riparian habitat.

In addition to enhancement/mitigation projects, flood irrigated pastures, permanent ponds and marshes, and the Owens River and associated floodplains and oxbows are major mosquito source areas.

Because mosquitoes can migrate 10 miles or more, the source doesn't have to be right near a town to be a problem. And, mosquitoes can cause problems in recreation and agriculture areas.

The district targets two categories of mosquitoes: flood-water mosquitoes, whose breeding habitat goes through wet and dry cycles (oxbows, for example); and standing water mosquitoes, whose breeding habitat remains fairly constant (ponds, storm drains and even abandoned backyard hot tubs). Four species of mosquito live in the valley, one of which is capable of transmitting a particularly harmful strain of encephalitis to humans. This mosquito can lay 300 eggs at a time, which can lie dormant for 15 years if necessary.

"Every time an area floods, we go out and there's larval growth," Frederickson said.

At least one clinically confirmed case of St. Louis encephalitis has occurred in this area in the past, although Frederickson said it could not be proven that the disease was contracted locally. There have been three clinically proven cases of California encephalitis elsewhere in the state since 1955.

The district monitors for these mosquito-borne diseases, by testing blood samples from locally raised chicken flocks or by sending fresh-frozen adult mosquitoes to a lab in Berkeley to be tested for the virus. The results?

"We're finding the California encephalitis virus in the species *Aedes melanimon*," Frederickson said. "While it can cause encephalitis in humans, most infections are benign. That is, it's not likely to make you sick. This isn't the case with the St. Louis encephalitis virus. Although no evidence of the disease has been found in recent years, the vector species — *Culex tarsalis* — is prevalent throughout the valley."

Abatement work usually begins in April, at the start of the irrigation season.

"One of the most important jobs performed by district staff is surveillance," Frederickson said. "On a daily basis, we put on our boots and head out into the field. We go where the ranchers are irrigating, or where the river is flooding, walk out into the water, dip a sampling cup in, and determine what the larval counts are like."

The more wet areas there are in the valley, the more time it takes to conduct surveillance.

During the spring and summer, mosquito larvae take four to 10 days to grow into pupae. They turn into adults anywhere between a few hours to a few

days. So the mosquito control crew must work quickly.

And, they need access to the places where control is necessary. California Department of Forestry conservation camp crews regularly clear paths through thick willow stands that surround many river-associated mosquito sources.

The district uses three mosquito control methods which, together, constitute a program called integrated pest management. These are source reduction, or physical control, biorational control and chemical control.

"The first two, source and biorational control, are preferred," Frederickson said, because they have less impact on the environment.

One physical control entails timing flood waters so that they occur in a way that is not conducive to mosquito breeding.

Biorational control kills or alters the mosquitoes before they become flying adults, by using natural enemies such as mosquito fish, which eat the larvae; bacteria, such as *Bacillus thuringiensis*, which is ingested by the larvae and kills it; and insect growth regulators, which are distributed in granules at sources and alter the insect so that it is unable to undergo normal metamorphosis and can't emerge into an adult mosquito.

Chemical control involves the use of insecticides to kill mosquitoes in the larval, pupal and adult stages. One chemical, a larvaciding oil, is spread over the surface of water and forms a physical barrier to most air breathing waterborne insects. This suffocates both larvae and pupae. The drawback is that it can kill other waterborne insects.

When a large mosquito hatch does occur, the district must resort to chemical fogging, Frederickson said.

"We don't like to adulticide," he said. "It's expensive, and it also kills non-targeted insects. And just to get it to work

right is a job in itself. We usually go out between one a.m. and sunup. You need an inversion to keep the chemical low to the ground, wind speed has to be between two to five mph, and wind direction has to be right."

Once sprayed, the fog drifts across the land and kills many of the insects it encounters immediately. A chemical residue remains in the area for about four hours.

Frederickson said he hopes that chemical control becomes less necessary. This might be accomplished by working more closely with other agencies in the valley to reduce problems at the source.

"We would like to promote a program to improve irrigation systems and to rethink water management strategies," he said. "And we need to do this cooperatively."

On a daily basis, we put on our boots and head out into the field.

— Steve Frederickson

Water Reporter

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If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

Water Reporter

Inyo County Water Department

Volume 5 Number 1

February 28, 1992

Still saying 'No' to Rancho Riata hydro plant

On a clear winter day in the Owens Valley, 20-year resident Wally Crittenden drives his pickup truck along a rocky dirt road west of Bishop. The road travels land covered with brush, runs past a horse ranch, and heads toward a cluster of houses.

Near the ranch, Crittenden parks his truck and steps out into a brisk wind blowing across the recently rain-dampened desert. To the west and east, mountain ranges gleam with fresh snow.

Soon, two other long-time residents join Crittenden: Jim Wines and Bud Brewster. Wines picks up a stick and points at a pile of rocks that to him represents the center of a controversy that has consumed the thoughts and financial resources of these men and hundreds of other residents for the past 10 years.

The rocks, worn smooth by water flowing down from the Sierra Nevada through the Bishop Creek system, roughly mark the place where, someday, the Rancho Riata hydroelectric power plant might sit and churn creek water into money for private investors.

And that doesn't sit well with Crittenden, who has challenged the project because of its effects on Indian Creek and potential flow reductions on Bishop Creek.

"Here's a guy who moves in from the outside and wants to take our water to make a profit for himself," he says, referring to the developer, Joe Keating of Placerville.

Keating already has a license to build the project from the Federal Energy Regulatory Commission. The plant would have a 0.4 megawatt capacity, according to FERC, and would be able to generate enough power to serve about 250 homes. The draft environmental assessment on Rancho Riata calls the project "a private development of hydroelectric energy



Fearing the Future — Jim Wines, Bud Brewster and Wally Crittenden on a bridge at the Bishop Creek-Indian Creek diversion

designed to offset future fossil fuel dependence in California." Keating estimates the on-line cost of the automatic power plant would be \$1 million.

The power plant would feed off of water diverted from Indian Creek, which splits off of the main Bishop Creek channel at a diversion controlled by the Bishop

Creek Water Association, just below Southern California Edison's Plant 6, about three miles west of the Bishop city limits.

The diverted water would enter a buried penstock (pipe) and flow east across the desert about two miles to the power plant (near Reata Road — see map on page 2). After running through the automatic

plant's turbines, the water would be returned to the ditches.

Keating proposes to sell the energy to Southern California Edison. SCE has five hydroelectric power plants on Bishop Creek. Under the 1978 Public Utility

See **Still saying 'No,'** page 2

Groups still negotiating over L.A.'s environmental impact report

Several groups dissatisfied with Los Angeles' environmental impact report on groundwater pumping in the Owens Valley are still negotiating EIR issues with Los Angeles and Inyo County.

Los Angeles is required to write the EIR under court order. Two previous attempts were rejected. This third attempt was submitted to the court last October. It covers Los Angeles' pumping from 1970 to 1990 and from 1990 into the future.

The Third District Court of Appeal has granted the right to file amicus curiae

(friend-of-the-court) briefs to these groups: the state attorney general, on the behalf of the Department of Fish and Game and the State Lands Commission, and the Owens Valley Indian Water Commission. Existing "friends of the court" are the Owens Valley Committee and the Sierra Club, who became involved in the EIR case in the mid-1980s. Inyo resident Stan Matlick has requested permission to file an amicus curiae brief but has not yet been granted that right.

Since being granted the right to file the briefs, the groups have been discussing set-

tlement of the EIR issues with Inyo County and Los Angeles. As a result of these talks, the Indian commission has told the court it will not file a brief. The other groups have

told the court they expect to reach, or not to reach, a settlement by April 1.

The court is not bound to that timeline, however. It may issue an order at anytime.

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Still saying 'No' to Rancho Riata hydroelectric plant ...

(from front page)

Regulatory Policies Act (PURPA), utilities such as SCE are required to purchase power from and interconnect with a privately developed hydro facility.

Crittenden, Wines and Brewster, who are members of the Bishop Creek Water Association, and others opposing Rancho Riata contend there is not enough water to run the power plant economically and still maintain sufficient flows in the Indian Creek ditches.

They say the project not only threatens Indian Creek and its users, but ultimately could reduce flows in Bishop Creek, which provides water for much of Bishop's gardens, ponds, irrigation, and recreation, and eventually flows through the city park.

"Everybody here has water on their property and [if they build the power plant] there just wouldn't be any more," Crittenden says. "They'd end up taking it all."

The Bishop Creek Water Association, which has 900-plus members, formed a

committee in 1986 called the Friends of Bishop Creek whose mission was to raise money to pay for a lawyer to fight the project. They hired attorney Tony Rossmann, who also is representing the Bishop Paiute/Shoshone Indian Tribe and the County of Inyo in opposing the project.

Last month, Rossmann took the years-long battle against Rancho Riata back to the federal 9th Circuit Court of Appeals after settlement talks stalled in disagreement. He has filed a motion requesting a rehearing with the Federal Energy Regulatory Commission (FERC) to try to get the commission to drop the project's license.

"We're saying there's not enough water there," Rossmann says. "And the big thing is, if he [Keating] gets his plant in there, he's likely to ask for more water."

Rossmann says it has been an uphill battle.

"The commission is not known for granting a rehearing," he says. "FERC has not been sympathetic with state interests in

the past. And the United States Supreme Court has gradually been ruling more and more in recent years with FERC."

The project's developer, Keating, has declined to comment on the issue, saying it would be "inappropriate to talk about it now that it is in a court setting."

Larry Stidham, an attorney with the California Indian Legal Services who is monitoring the situation for the Bishop Paiute/Shoshone Tribe, says the project could cause a shortfall of water to the tribe.

"The ditch that provides water to the southwest portion of the reservation would not get water," Stidham says. "The City of Los Angeles is required to provide four acre-feet a year to the reservation for irrigation, and that water comes through the Bishop Creek system."

"We also have the concern that the project might interfere with federally protected water rights, which are real close to where the water would be diverted" from Indian Creek.

In a 1939 land exchange, the tribe traded their land on the south side of West Line Street to the Los Angeles Department of Water and Power for the land where their reservation is today. Stidham says the United States retained the water rights to the old reservation land.

"The United States has a trust obligation to protect the tribe's water rights," he says.

The Rancho Riata project dates back to the early 1980s, when separate developers applied for licenses from the federal government to build hydroelectric power plants on numerous streams in the Owens River Basin. One of them was the Rancho Riata Project, proposed by local hydro developer John Symons. FERC denied all of the applications except for Rancho Riata, and in 1988 granted a license to Symons. (Symons later sold the project and transferred the license to Keating, who is part of Rancho Riata Hydro Partners, Inc.)

After the license was granted, opponents had a limited amount of time in which to attempt to intervene. For different reasons, nobody made the deadline or submitted an accurate application to intervene except for Crittenden. FERC granted him status as an intervenor, which meant it would have to consider his arguments before allowing the project to proceed.

Through Crittenden, Inyo County and the other opponents to the project were able to combine forces to fight Rancho Riata. They are basing their fight in part on evidence gathered by Andy Zdon, Inyo County's assistant hydrologist, and on what

they see as a persistent sketchiness to some of the project's details.

According to FERC, Rancho Riata Hydro would be required to leave enough water in Indian Creek to maintain sufficient flows to maintain fish habitat in Hall and South Indian ditches, two forks of Indian Creek. FERC also requires that historic flows be maintained in the third fork of Indian Creek, called North Indian Ditch.

"Keating had anticipated dewatering North Indian Ditch, initially," Rossmann says. "In response to a letter from Jim Wines, FERC said North Indian is supposed to maintain historic flows."

According to FERC and the project's environmental assessment, there is enough water in Indian Creek to maintain the necessary historic and fish maintenance flows and operate the power plant.

But Zdon performed an analysis of the project, using historical data from the Los Angeles Department of Water and Power and data he collected in field studies last year, and came up with a different perspective. He said Keating's environmental assessment of the project did not acknowledge many of the water uses in the area bypassed by water diverted into the penstock, called the bypassed reach. Consequently, the license gives flow amounts available to the power plant that are higher than what is actually available, Zdon says.

"It's a difference in interpretation of how the fish maintenance flows are to be distributed, and how the historic flows for North Indian Ditch will be credited" he says.

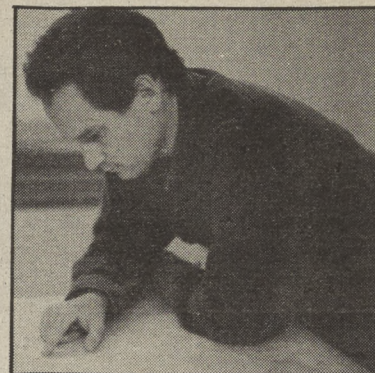
Zdon sees the minimum fish flows, which are for Hall and South Indian ditches, and the historic flows for North Indian Ditch, as two separate flow amounts which must be added together to determine how much water is to be released down Indian Creek.

"They're saying that the North Indian historic flows and other uses are to be taken from the minimum fish flows," he says. "That would drastically decrease flows to Hall and South Indian, because half the water would go down North Indian."

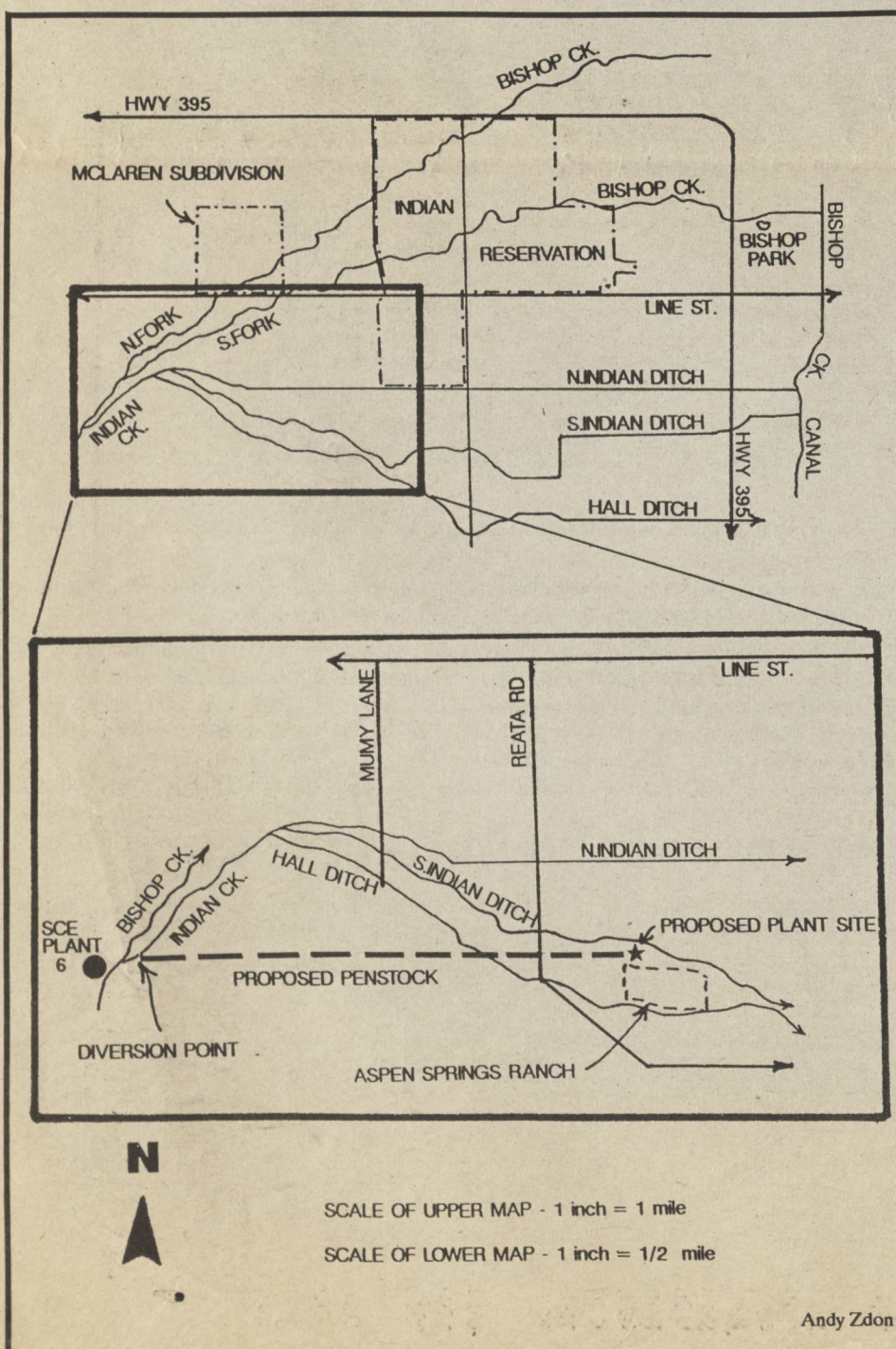
Zdon says the license also ignores significant uses of water along the ditches.

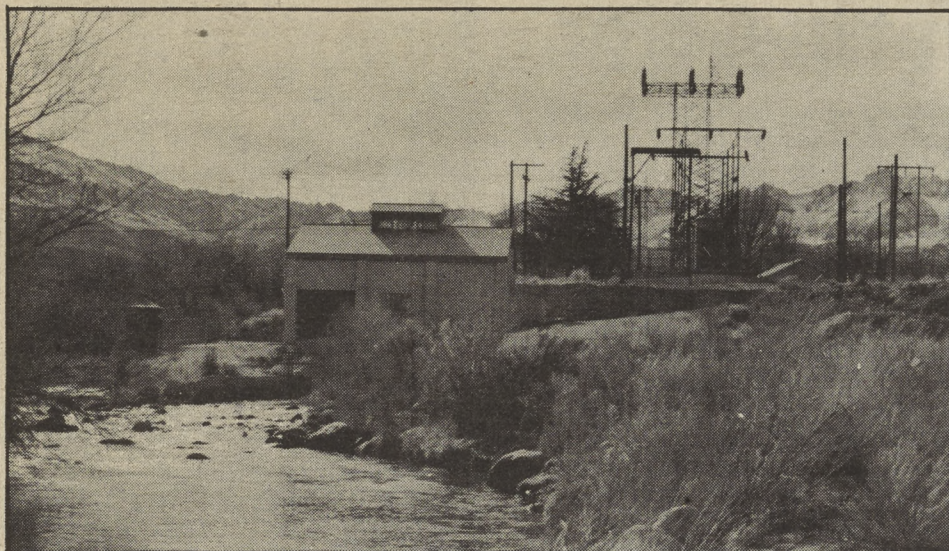
"Reports by Keating and FERC didn't recognize that uses occur," he says. "However, there are three diversions off of South Indian Ditch: the Reata Ditch, which goes to stockwater; the Watterson Ditch, which goes into a subdivision for domestic use; and a diversion for a pump to irrigate an alfalfa field."

According to Zdon, whose data reflects the lower flows that have occurred during the past five years of drought, average flows in the Indian Creek system average from 18 cfs to 41 cfs on a monthly basis. Keating's estimates of average flows



Andy Zdon





SCE's Plant 6 on Bishop Creek

Southern California Edison enters 7th year of relicensing hydro plants

At least seven streams in the Eastern Sierra will get more water and their dry sections will be rewatered if mitigations negotiated in Southern California Edison's hydroelectric relicensing process are approved by the federal government.

SCE has four hydroelectric power projects in Inyo and Mono counties. The power company will meet in March with the California Department of Fish and Game and the U.S. Forest Service to finalize mitigation details before submitting the information to the Federal Energy Regulatory Commission (FERC). FERC oversees and licenses a number of

hydroelectric projects throughout the country.

The 50-year licenses for the Eastern Sierra projects expired in 1986 and since then SCE has been operating the projects on automatic, yearly license extensions while conducting environmental and other studies as part of the relicensing process. The projects have a total of eight powerhouses.

On Bishop Creek, in Inyo County, SCE has five powerhouses that constitute one project. The other three powerhouses are

See **Relicensing**, back page

are slightly higher, Zdon says, because he did not consider data from the recent drought years. From the average flows, Keating subtracted the historic flows required for North Indian Creek and came up with a range of 8-21 cfs in flows available for the power plant.

When Zdon performed this calculation, he included the minimum fish flows established by FERC, downstream uses and channel losses from percolation and came up with an available flow to the power plant ranging from 0.5 to 5.5 cfs.

Rossmann says discrepancies such as these have been an overall problem with the project and are reason enough to ask FERC to rescind the license.

For example, the original license was granted on an application that placed the project in a narrow canyon. It also proposed returning water from the power plant back to the Hall Ditch via the abandoned Owens River Canal, but it was pointed out that that plan would have the water flowing uphill. There were also problems with the plant's proximity to a housing tract.

In response, the license was amended to give the correct location, the canal idea was dropped, and the site was moved upstream farther away from the houses. (Wines has followed these developments by marking the site location with rockpiles.)

But the muddle over flow interpretations sustains a current round of disagreement. In a Feb. 6, 1992 letter to FERC Secretary Lois Cashell, called an "Answer to Motion to Vacate License," Keating's attorney, Gail Ann Greely, questions the inclusion of water losses in calculations of available flows and the failure to connect such losses with ditch operation.

She says the Bishop Creek Water Association "has obviously been compensating for such losses for years by redistributing flows among the system's ditches. Should renewable energy generation be lost now so that water can be wasted in the irrigation system?"

She further maintains that Rancho Riata's licensee has accepted the risk implied by the flow regime of the ditches.

She writes, "The project will have water to divert only to the extent that [the Bishop Creek Water Association] diverts it from Bishop Creek."

The Association diverts a certain amount of flows from Bishop Creek and divides water between downstream users (members of the Association). Since the early 1900s, the Association has managed to distribute its share of water under a system of self government. None of the Association's members hold individual water rights from the state water board.

Katherine Mrowka, of the State Water Resources Control Board's Division of Water Rights, says Keating has applied for 30 cfs year round for Rancho Riata, which is about 21,681 acre-feet per year.

"There are 24 outstanding protests against Rancho Riata's water rights application," Mrowka says. "We can't grant the rights until we resolve the protests."

Rossmann says the Rancho Riata project could "set off a spark" perhaps leading to Association members having to prove up on their individual water rights.

"The big question is, who's really at risk with this project?" Rossmann says. "Keating? Once he gets this thing built, he won't be content to be at risk. He can go back to FERC and say, 'Look, I've made this big investment and now I need more water to make it work.'"

FERC could deny a request for more water. But Zdon says the consequences wouldn't be satisfactory.

"They'd be tearing up a section of field and possibly killing off riparian zones during the time they were trying to find out if it's economically feasible," he says. "Then, if they shut down, we're left with an abandoned power plant sitting there as an eyesore, not to mention having hurt downstream users in the meantime."

If FERC granted additional water for the plant, Zdon says the water would have to be diverted from Bishop Creek into In-

dian Creek, meaning less water would reach users of the north and south forks of Bishop Creek.

Despite the fact that a section titled "Future Development" in the final environmental impact statement on the project says "the applicant has no further plans for future development at the Rancho Riata site," the people along Bishop Creek think more water diversion is likely to happen.

Brewster, who was chairman of the five-member Friends of Bishop Creek until he resigned recently for personal reasons, says the committee has exhausted its finances — about \$15,000 raised in donations — fighting this possibility. But the committee has seen victory along the way.

"One thing that seemed very important to us was the fact that the Los Angeles Department of Water and Power owned the land where the plant and penstock would be," Brewster says. "We developed a petition and sent it to DWP with over 4,000 signatures, telling them of our fear that the eventual impact could change surface water flows throughout Bishop, and how we felt the quality of life up here, and the thing that makes this place attractive to tourists, would be threatened by the hydroelectric plant."

LADWP responded that for it to support the project, it "would want the concurrence of the county, the City [of Bishop], and the people," says Glenn Singley of the LADWP Bishop office.

"Right now, [the licensee] is discussing condemnation of the land through FERC. We told them we would see them in court to oppose that condemnation," Singley says. "The only way we'll sell the land is if we see a clear benefit to [Los Angeles], or to Inyo County or Bishop. We don't see that so far."

Rossmann says public benefits from the small power plant would be "marginal."

"It ain't Boulder Dam," Rossmann says. "The only public interest it serves is to reduce a little of fossil fuel use. [And] it's

not a great cash cow for Inyo County," in terms of taxation.

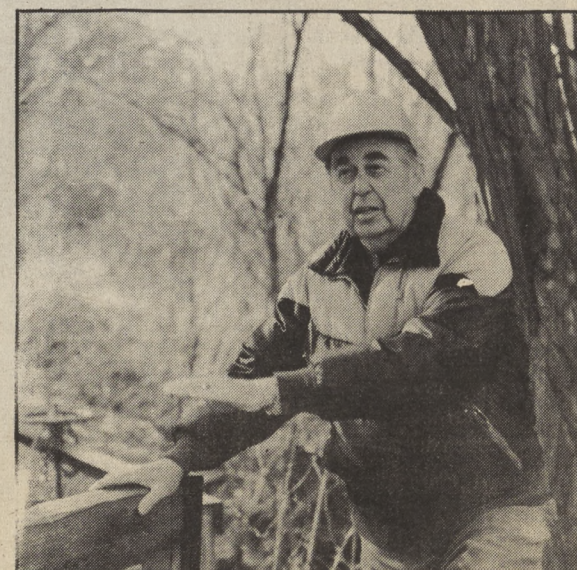
And while reduction in fossil fuel use, no matter how small, is something most people would consider a benefit, Rossmann says the disadvantages of Rancho Riata to the local people outweigh that benefit.

"According to [PURPA], hydro has to be bought by Edison at the price of foreign oil and not at the cost of production," he says. PURPA was conceived as a way to preserve the old mills in New England. "But when applied to the West, it hasn't been the old, tired run-down mill, it's been Keating, saying throughout the country, 'Is there an undammed stream left?' And in all candor, a big part of our case is who we are — we're the Owens Valley. We've had our share [of water development] and we're saying, wherever you do this, don't do it here."

Rossmann says he thinks the court probably will tell FERC to reanalyze Keating's license. And Wines and others who live along Bishop Creek remain optimistic.

"I think FERC's going to cancel the license," Wines says.

And if that happens, he can go scatter the rockpile for once and all.



Jim Wines

L.A. considers new hydro plant in Gorge

The Los Angeles Department of Water and Power is considering plans to build a five megawatt hydroelectric power plant in the Owens River Gorge to offset power lost to its three gorge plants when it releases more water into the middle gorge.

Last June, after its penstock ruptured in an accident, LADWP was pressured by state and Mono County officials to return water to the dry middle gorge, from which water had been diverted for 40 years to feed the power plants. LADWP released an initial flow of 16 cubic feet per second (CFS).

The 16 cfs, which results from dam seepage and spring flows, already exists in the upper nine miles of the gorge between Crowley Lake Dam and the Upper Gorge Power Plant. But it is not enough to restore the lost gorge fishery, and LADWP is working with DFG and Mono County to deter-

mine what the final flows should be. In the meantime, they also must set flows for during a five-year interim of study. So far, the groups have tentatively agreed on 80 cfs for average yearly flows, said Gary Schaad, chief operator of the gorge plants. Such flows, which could fluctuate between 50 cfs in the winter and 100 cfs in the summer, would mean a decrease in the water flowing through the middle and lower plants.

"About 5,200 customers could be affected by the lost generation," Schaad said. Each of the plants has a capacity of 37 1/2 megawatts and can produce enough energy to supply 25,000 customers, he said.

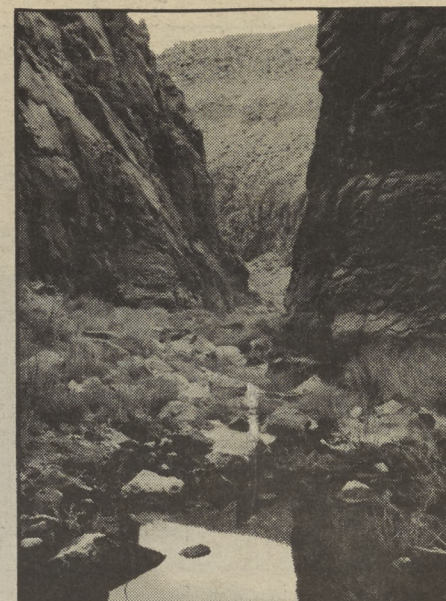
George Brodt, a civil engineer with LADWP's power division, said before they can release more water, they have to study such issues as sediment control and obstructions in the riverbed, as well as how

to actually release the water at the upper gorge plant. This could take two years.

"We'll have to build release facilities," Brodt said. "At the upper power plant, you have 800 feet of head. You can't just release it — it would tear up the streambed."

He said they are considering cutting a hole in the penstock feeding the plant and running a smaller pipe about 1,000 feet downstream. There, they would build a headbreaking valve (a large pool of water) to dissipate the energy from the water. Through this system they would run the water needed to meet interim flows, which would mingle with the current 16 cfs.

"Probably after constructing the headbreaking valve, we'll build a 5 megawatt 'energy recovery plant,' down in the gorge next to the headbreaking valve," Brodt said.



Leah Kirk

Middle Gorge — The 16 cfs seeps into the riverbed halfway between the point of release and Pleasant Valley Reservoir

Relicensing, from page 3

in Mono County, on Rush Creek, Lee Vining Creek (the Poole Plant), and Mill Creek in Lundy Canyon (the Lundy Powerhouse).

Bishop Creek Hydro is the largest of the projects, with three reservoirs (South Lake, Sabrina Lake and Intake 2), a total capacity of 26 megawatts and a workforce of 46 people. The Rush Creek Plant (11 megawatts) also has three reservoirs, as does the Poole Plant (10 megawatts) on Lee Vining Creek. The Mill Creek Plant (3 megawatts) uses Lundy Lake as its reservoir.

The power plants were constructed in the early 1900s and controlled by California Electric Power Company. FERC's predecessor came into being in the 1920s. In 1936, the projects were licensed. They become part of the Edison Company in a 1964 merger with California Electric.

SCE hopes to have them all licensed for another 50 years.

Gary Aubrey, manager of Bishop Creek Hydro, said SCE started working on the relicensing in 1981 with FERC, the California Department of Fish and Game, and the United States Forest Service. Although it is up to FERC to renew the license, each of these agencies has a say in how SCE will conduct its operations for the next 50 years and how it must mitigate effects of the past 50 years of operation.

"Since we've used the water for 50 years and haven't had to put much back into

the area, it's felt by agencies that we should do some mitigation projects," Aubrey said.

In negotiations over the past several years, SCE, DFG and the forest service have agreed on changes that should take place in SCE's operation of its Eastern Sierra power plants, although there is still disagreement on the degree of some of the changes.

"We've been looking at environmental and recreational issues," Aubrey said. "We've agreed there will be recreational water releases between our dams."

These releases include flows for fish habitat, riparian vegetation, and aesthetics, he said. SCE also will rewater dry sections of creeks where water has been diverted into penstocks for the power plants. Dry sections on Bishop Creek occur near each of the power plants from South Lake all the way down.

Water also will be returned to Birch and McGee creeks, which are diverted into a pipeline that feeds Plant 2.

And the sections of Lundy, Lee Vining and Rush creeks that are dry from SCE diversions also will be rewatered.

Just how much water to release into the creeks has been controversial.

Aubrey said the rewatering could mean a 10 to 15 cubic feet per second (cfs) reduction in flows going into SCE's power plants, particularly on Bishop Creek. This would represent an eight percent loss in power generation, he said.

Joe Stutler, an operations staff officer with the forest service office in Bishop, said his agency has recommended 15 cfs be released from Intake 2 to Plant 4 on Bishop Creek.

But Darrell Wong, a fishery biologist with DFG, said the flows could be higher.

"The forest service and fish and game don't concur on what the recommended flows should be," he said. "More recently, the forest service has decided to go with fewer flows than what we would ask for."

Wong said the flows DFG is asking to be released, particularly on Bishop Creek, would "only represent a 17 percent loss" in generation to SCE.

"We still have some things to work out," Wong said.

Regardless, when the license is issued, it will guarantee that all of Bishop Creek will have water in it, Stutler said. And, there will be a guaranteed flow of two cfs into Birch Creek and McGee Creek will no longer be diverted at all.

SCE also will be contributing to a new entrance station to deal with the public along the Bishop Creek drainage. And SCE has agreed in negotiations to build and maintain forest service campgrounds — or provide the money to the forest service to do that — along Bishop Creek.

These are some of the conditions outlined in the forest service's "4E Report," named after Section 4E of the Federal Power Act.

"Anytime you have hydroelectric power projects on national forest land, the forest service has to issue a special use permit in which we give FERC our special license conditions," Stutler said.

He said the forest service's authority involving FERC licensing is strengthened by the 1984 Escondido Decision, from a case decided by the Supreme Court, which holds that when a power plant is on forest service land and there is a discrepancy between the FERC environmental assessment and license issued for that project and the special use permit issued by the forest service, preference is given to the forest service permit.

Stutler said the March meeting should be the last consultation meeting with DFG to work out some of that agency's concerns, and with SCE, before they send the 4E Report to FERC.

To evaluate the hydroelectric projects and provide information for such reports as this and FERC's environmental document, SCE has conducted studies along the

affected creeks since the early 1980s, said SCE biologist John Irwin.

"We have to show what the resources are like and what needs to be improved," he said. "The studies are ongoing. For example, we're trying to determine baseline conditions along the creeks so that we can detect any changes from the increases in in-stream flows."

The studies are being conducted in coordination with the forest service, DFG and the Bureau of Land Management, Irwin said.

Aubrey said SCE biologists and biology consultants have conducted such studies as in-stream flow measurements to determine fish habitat capabilities in each creek, riparian vegetation surveys, and fish entrapment tests to determine whether or not fish are going through the power plants' generators.

Despite changes in SCE's operations, such as flow releases into the creeks for the fish, that will have to occur when new licenses are issued, Aubrey said SCE does not plan to modify the power plants to handle the water loss.

"We've had studies made on our plants and we're using the water to its best efficiency," he said.

The generation loss is a trade-off, Aubrey said, for the years Edison has operated in the Eastern Sierra with no environmental constraints.

"Edison is interested in the environment, just like everybody else," he said.

Aubrey said he expects the Eastern Sierra hydroelectric projects to be licensed within the next year or two. They won't be the first to be relicensed, however. Some of the company's hydro plants on the west side of the Sierra have already gone through the process, and several more are coming due.

"We've never been turned down for a license," Aubrey said. "But the relicensing process becomes more and more complicated."

Water Reporter

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If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

Water Reporter

Inyo County Water Department

Volume 4 Number 9

November 1, 1991

Inyo and Los Angeles approve agreement

The Inyo County/Los Angeles long-term water management agreement has been approved, leaving court approvals as the final barrier to its becoming effective.

On Oct. 18 in Los Angeles, representatives from Inyo County and Los Angeles, including Los Angeles Mayor Tom Bradley, signed the agreement.

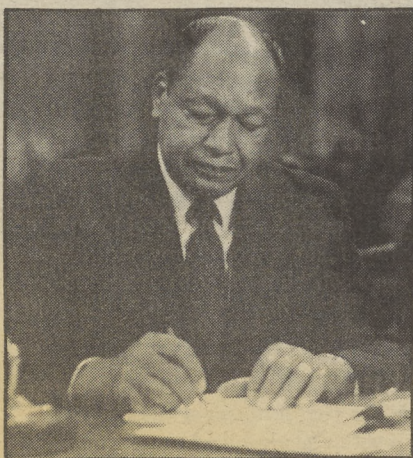
"This is an historic day," Bradley said. "We have determined that it is far better to negotiate than litigate . . . Instead of the sometimes bitter arguments and debates, we now are going to jointly manage the precious water resources in [the Owens Valley]."

The agreement process began eight years ago, when Inyo County and Los Angeles signed an interim agreement to suspend litigation begun in 1972 in order to jointly develop a long-term plan for managing water in the Owens Valley. They reached a preliminary long-term agreement in August 1989.

Since then, Inyo and Los Angeles have operated under many of that agreement's provisions, including turning off groundwater pumps to allow water table recovery and to protect the Owens Valley vegetation.

But it wasn't until the official signing ceremony two weeks ago that the long-term agreement became a commitment between Inyo County and Los Angeles to co-manage the water resources in the Owens Valley, with the primary goal being protection of the valley's natural environment. (It is up to the court to make this commitment legally binding.)

Accompanying the agreement is an environmental impact report the Los Angeles Department of Water and Power was re-



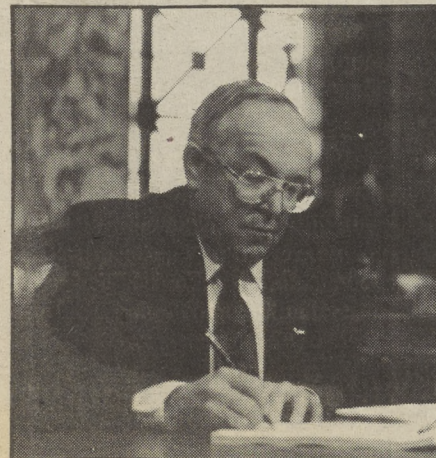
Signing — Los Angeles Mayor Tom Bradley and Inyo Supervisor Bob Campbell

quired to prepare regarding groundwater pumping to supply water to its second aqueduct from 1970 to 1990 and from 1990 onward.

The LADWP, lead agency in preparing the EIR, certified it Oct. 15 at the same time it approved the agreement. Inyo County, responsible agency in preparing the EIR, also on Oct. 15 approved the agreement and certified the portion of the EIR dealing with groundwater pumping from 1990 onward as it pertains to the agreement. The documents were delivered Oct. 21 to the Third District Court of Appeal, where the final decision will be made to either approve or not approve the EIR.

Prior to the county and city approvals, Inyo County held four public meetings to hear the public's views of the agreement and EIR.

What follows is a chronology of the most recent, salient events in 1991 leading up to the official signing of the long-term water management agreement:



- August — Inyo County and Los Angeles complete the final EIR and release it for public review.

- Sept. 24 and 25, Oct. 8 and 9 public meetings, and other public comment — Inyo County Board of Supervisors and Inyo County Water Commissioners hold public meetings throughout the valley. The general tone is that people like the agreement but are dissatisfied with the EIR.

Among the public's primary concerns with the EIR:

- The Owens Valley Committee says the EIR "fails to adequately document pre-project conditions and impacts that occurred between 1970 and 1990." The California Native Plant Society, the Audubon Society and the Sierra Club agree with this.

See **Approved**, back page

Appellate Court will determine fate of plan

The long-term water management agreement cannot be implemented unless the Third District Court of Appeal in Sacramento approves the final environmental impact report on Los Angeles groundwater pumping to supply its second aqueduct. The EIR was delivered to the court Oct. 21.

Greg James, Inyo County Water Department Director and special counsel, said the court's decision may depend on the actions of several groups: The Sierra Club Legal Defense Fund, the California Department of Fish and Game, the Owens Valley Committee, and the Owens Valley Indian Water Commission, among others, have indicated they are not pleased with the final EIR.

"Dissatisfaction may turn into legal challenges to the EIR," James said.

The EIR covers Los Angeles' pumping from 1970 to 1990 and from 1990 onward.

James said the court only will look at the adequacy of the EIR and will not rule on the actual agreement. Because the future, or 1990 onward portion of the EIR pertains to the agreement, the court's ruling will decide the fate of the agreement.

"If the court does not approve the EIR, it will be up to the court as to whether all or part of the agreement can be implemented, or whether the court will limit pumping in some other manner until completion of a fourth EIR," James said.

This EIR is Los Angeles' third attempt to satisfy the California Environmental Quality Act — the first two EIRs were ruled inadequate by the court. The EIR process began in the 1970s.

In 1970, the Los Angeles Department of Water and Power completed its second Los Angeles aqueduct in the Owens Valley and increased groundwater pumping and surface water diversions to supply it.

In 1972, Inyo County sued Los Angeles, saying its groundwater pumping was harming the valley's vegetation. The court

See **Court**, back page

What does this mean for management?

Since October 1988, Inyo County and Los Angeles have jointly managed Los Angeles' groundwater and surface water practices in the Owens Valley according to the environment-oriented provisions of a proposed long-term water management agreement.

If the appellate court approves the final EIR and the agreement becomes fully effective, how will management change?

It will not change except to improve with expanded monitoring, new studies, revegetation projects, and mitigation projects such as increasing flows to 50 miles of the lower Owens River.

Most important, the drought recovery policy which Inyo and Los Angeles are operating under will remain in effect. This policy has been included in the final en-

vironmental impact report concerning Los Angeles' groundwater pumping to supply water to its second aqueduct. The policy provides, in part:

"Recognizing the current extended drought, the [Inyo/Los Angeles] Standing Committee establishes a policy for annual management of groundwater pumping during this drought. The goal of this policy is that soil water within the rooting zone recover to a degree sufficient so that the vegetation protection goals of the agreement are achieved.

"To this end, groundwater pumping during this drought, as well as the period of recovery, will be conducted in an environmentally conservative manner, taking into consideration soil water, water tables, and vegetation conditions."

The policy requires the Standing Committee, in establishing an annual pumping program, to evaluate "current conditions including soil moisture level, water table depth, degree of water table recovery, soil

See **Inyo**, page 2

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Water commission complete with Yoder

After spending eight years on the sidelines pushing Inyo County government to try harder for protection of the Owens Valley from Los Angeles' water gathering, Vince Yoder has gone one step farther and assumed an official county role.

As the newest member of the Inyo County Water Commission, Yoder, from Lone Pine, fills a void left by Carla Scheidlinger's resignation from the commission this summer.

Scheidlinger, a botanist who added a strong environmental voice to the commission, resigned when she began researching water rights for local Indian tribes.

Yoder has lived in the Owens Valley for almost 14 years. He said his environmental background should "broaden the scope of the committee."

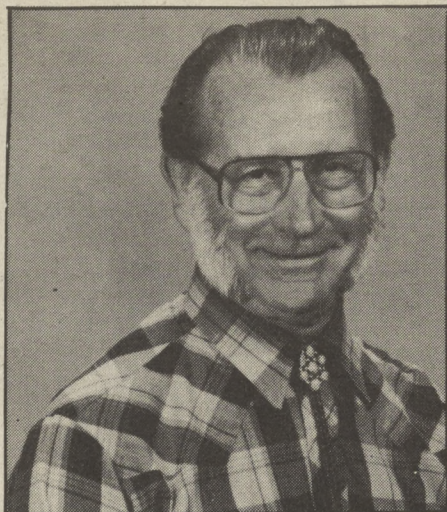
"I've been environmentally oriented all my life," he said.

His parents' interest in the environment influenced Yoder from the start. He studied forestry at the University of Idaho, graduating in 1942 just in time to serve in World War II. He returned home to find that "pay scales with forestry were pretty dismal."

So he took a job with Caltrans and stayed, working in San Francisco, until he retired in 1976.

"After I retired, it didn't take my wife and me long to decide to move over here to the Owens Valley," Yoder said. "I immediately put my forestry background to use by initiating a study in the Alabama Hills."

The study, which detailed and identified the shrubs in the Alabama Hills, was published in the botanical journal *Madrono*.



Vince Yoder

After that, Yoder began delving into local environmental issues. He is a member of the Sierra Club and he used to belong to the Audubon Society until he just got too busy to do it all.

He is co-chair, with Scheidlinger, of conservation for the Bristlecone Chapter of the California Native Plant Society. Scheidlinger handles any of the Chapter's dealings with the Inyo County Water Department or the Los Angeles Department of Water and Power, so that Yoder can avoid conflicts of interest as a water commissioner.

Yoder's direct involvement with water issues in the Owens Valley began in 1983, when Inyo County and Los Angeles entered into the interim agreement to regulate groundwater pumping and develop a long-term management plan.

"There was a citizen's advisory group created to talk to the water commission,"

Yoder said. "They [the water commissioners] didn't listen to us so we got mad and started the Owens Valley Committee." (The Owens Valley Committee has influenced Owens Valley water politics ever since.)

That was in 1983. Now, in 1991, with the completion of a third environmental impact report on Los Angeles' groundwater pumping for its second aqueduct and with the approval of the long-term water management agreement between Inyo County and Los Angeles, Yoder's interest in the issue and pressure from his peers prompted him to apply for the position on the Inyo County Water Commission.

He said the issue interested him from the start because Los Angeles' water gathering activities were affecting the vegetation, "particularly rare species such as the Mariposa Lily."

He said the long-term agreement, which has yet to be approved by the courts, is a good agreement.

"It's not perfect and I think some of the monitoring features need polishing," he said. "But I think that's what the county and city employees will do. Although I think it's going to be pretty much up to the county to do the work, to develop the information."

Yoder said he is particularly looking forward to some of the environmental improvements provided by the agreement, such as the project to increase flows in the lower Owens River to enhance wildlife and fish habitat.

"The agreement is certainly a landmark — there's none other like it in the country," he said. "Without it, the city would be pumping like mad."

Aerial photo study planned

From 6,000 feet above the ground, the Owens Valley landscape becomes an expanse of weird geometric features alien to eyes used to seeing the world from about six feet above the ground.

But when viewed by a trained eye, this high-altitude perspective reveals the familiar: a clump of trees, some willows, scrub vegetation, the Owens River, old river meanders, the Los Angeles Aqueduct, abandoned fields, springs.

This particular view of the valley, captured in the form of aerial photographs (see next page), will be used to better understand changes in the valley's vegetation, and possibly to enhance Inyo's environmental monitoring program.

Los Angeles and Inyo County have agreed to initiate a study to determine the usefulness of aerial photographs, using experts in the field of aerial photography.

The study would have at least two phases.

The first phase would be performed by aerial photograph experts, who would analyze existing photographs taken between 1968 and 1991 to determine whether they can be reliably interpreted to provide descriptions of vegetation changes that occurred in the Owens Valley during the same period.

As part of this phase, the experts would determine the resolution of these photographs, according to Inyo County's plant monitoring specialist, Sally Manning.

"If the information is there and can be interpreted objectively, then we want to know what can be seen," said Manning, whose interest in the aerial photographs lies in their potential as future monitoring tools.

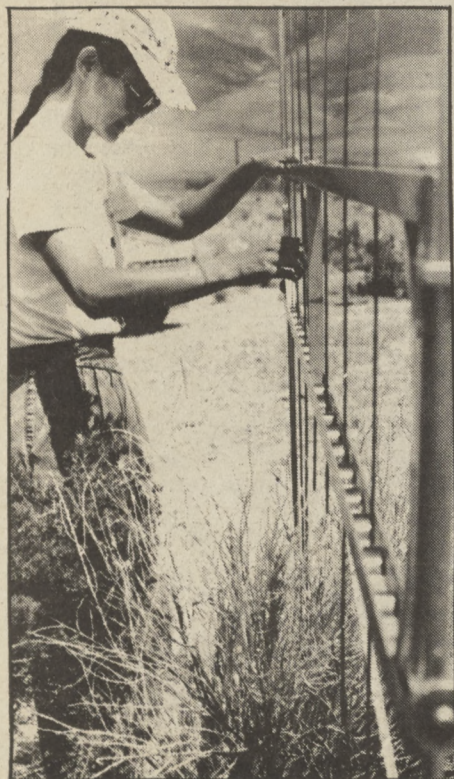
"What we want to know is, can you see actual species," she said. "Or do you just see shrubs, grasses and trees in general? Or merely shadows? We want to know the level of detail contained in these photos."

One thing Manning hopes to see come out of this study is an interpretive key for identifying features in an aerial photograph.

"A key would help standardize the interpretation of aerial photos so conditions on the whole valley floor can be precisely assessed," she said.

Should the photographs prove useful for distinguishing vegetation changes, a second phase of the study would attempt to correlate changes in hydrologic conditions with observed changes in vegetation, Manning said.

Inyo, from front page



Hit — Inyo County's Irene Yamashita runs a point-frame transect, recording each time a pin hits a leaf along a line

type, vegetation conditions, results of studies pertaining to vegetation recovery, and compliance with the goals of the agreement."

"It is probable that this policy will result in reduced annual pumping programs as compared to annual pumping programs based solely on soil moisture conditions," the policy concludes.

Already, many groundwater pumps have been turned off to protect water levels and vegetation. Of Los Angeles' 96 pump-equipped wells in the Owens Valley, only 33 remain on while 63 are off. Most of the 63 are off because of the provisions of the drought recovery policy.

Traditional monitoring of the Owens Valley vegetation and water resources will continue.

Since 1987, vegetation monitoring has consisted of measuring plant leaf area using data collected in the field, and measuring soil water potential.

These methods were augmented this year with additional studies. One new monitoring tool put to use this year is groundwater contour maps, which tell

depth to water levels and changes in depth to water levels over time in locations throughout the Owens Valley.

Inyo's hydrology staff developed the maps from groundwater data, and plant specialists can use these maps when trying to determine impacts to vegetation from pumping.

Inyo's hydrologic monitoring includes once a week on/off status checks of LADWP's 96 pump-equipped wells, weekly confirmation of depth-to-water measurements, weekly measurements of well discharge from these wells, monitoring flow in surface water conveyances, monitoring spring flows at Reinhackle spring and other valley springs, and taking monthly measurements in 18 indicator wells to monitor water table recovery.

A study of aerial photographs to determine their usefulness as an additional monitoring tool will be commenced (see story, right, and page 3).

Also, work will begin on developing revegetation programs for impacted areas, and on developing a mitigation plan for the lower Owens River.



This example of an aerial photograph shows where the Owens River is diverted into the Los Angeles Aqueduct south of Tinemaha Reservoir and north of the Black Rock Fish Hatchery. It is one of 1,300 photographs of the Owens Valley taken this year by I.K. Curtis Services, Inc., of Burbank, for the Los Angeles Department of Water and Power.

All 1,300 aerial photographs were shot vertically from 6,000 feet above

the ground with equipment that uses 9 1/2-inch color film.

Using flight lines plotted on topographic maps, the photographer looks through a periscope and tells the pilot exactly where to fly. A computer on the airplane measures the ground speed and the camera automatically takes the photographs.

Each photograph overlaps the preceding one by 60 percent, and each flight line, running north to south,

overlaps the preceding flight line by 30 percent.

This allows examination of two adjacent photographs under a stereo viewer, through which depths and heights can be discerned.

Ivan Curtis, of I.K. Curtis, said it took about four days, at about three hours each day, to fly the Owens Valley.

The scale is one inch on the photograph equals 12,000 inches (or 1,000 feet) on the ground, or 1:12,000.

Approved, from front page

— These groups also say the EIR does not “appropriately mitigate impacts to ecologically important springs.”

— These groups and many other citizens want the EIR to include the assessment of impacts to the valley by use of aerial photographs taken in 1968, 1973, 1988 and 1990. (Inyo County and Los Angeles have agreed to conduct a study to determine the usefulness of the aerial photographs and to develop a program for using aerial photographs in the future.)

— Many commentators said the responses to comments were too general and of the quality of form-letter responses.

— The Lower Owens River project should be mitigation for the river only, and not for other impacts in the valley.

- Oct. 7 — The Inyo County Water Commission unanimously agrees to recommend that the Inyo County Board of Supervisors approve the agreement and the EIR as it pertains to the agreement.

Water Commissioner Harry Holgate said: “The agreement is hard won. It’s good for the county, it’s good for the valley, and it’s good for the environment. The EIR is done — poorly done. It’s certainly not the best package available.”

But, he said, the EIR serves its purpose in that it provides the groundwork for the future, for the agreement.

- Oct. 15 — First District Supervisor Warren Allsup reveals the results of a mail poll in which he asked his constituents to vote for or against the agreement, saying he would base his decision upon the overall response. He mailed out 2,346 surveys and received 1,045 back, for a 44.5 percent return. Of the 1,045 who responded, 937 (90 percent) voted yes, 91 (9 percent) voted no, and 17 (1 percent) were undecided.

- Oct. 15 — The Inyo County Board of Supervisors approves the agreement.

Fourth District Supervisor Keith Bright said: “It’s been a long process. For all practical purposes, we’ve been living under this agreement since 1989. That’s

what’s important — we’ve been under the test for two years.”

Inyo County District Attorney Buck Gibbons, who helped initiate litigation against Los Angeles in the 1970s, said: “There were a lot of angry words a number of years ago about whether the county should be in court . . . There’s a fine line between when to litigate and when to negotiate. The happiest time is when they work together. Hopefully, history will prove [the litigation] to have served us well.”

- Oct. 15 — The Los Angeles Board of Water and Power Commissioners approves the EIR and the agreement.

- Oct. 18 — At a ceremony during the Los Angeles City Council meeting in Los Angeles, the long-term water management agreement is signed by Inyo County supervisors Bob Campbell and Keith Bright, Los Angeles City Council member John Ferraro, LADWP commissioners Rick Caruso and Mike Gage, and Los Angeles Mayor Tom Bradley.

The signing was preceded by questions and comments from several Los Angeles City Council members.

Ernani Bernardi said he is in favor of the agreement. But he said people need to realize that Los Angeles must demand more water from the Metropolitan Water District to make up for the loss of water from Inyo County.

“I think it’s an embarrassment that it took us this long to get this agreement reached,” he said. “And I think that the people up in that community have been imposed on for an unusually long time with respect to the water situation up there.”

“Maybe this will open our eyes, and [we’ll] say, hey, the north is no longer our main water resource and we’d better start recognizing it . . . we’d better do something about getting the water that we’re entitled to from the Metropolitan Water District to make up for this tremendous loss of water.”

- Oct. 21 — Agreement and EIR delivered to the Third District Court of Appeal. (See front page.)

pleted in 1979, was ruled inadequate in 1981. In 1984, the court allowed Inyo and Los Angeles to suspend litigation and enter into an interim agreement to jointly develop a long-term agreement on water management. The court said this agreement could be a part of Los Angeles’ EIR.

Now the court must rule on this third EIR. The court has given the Sierra Club and the Owens Valley Committee until Nov. 25 to present their views (these two groups were part of a lawsuit dating back to 1984 objecting to the interim agreement).

When the decision will be made is unknown, James said, although “if history’s any guide, it took 18 months to rule on the adequacy of the last EIR DWP submitted.”

News Briefs

Inyo receives federal money for Yucca studies

The Department of Energy sent a check for \$135,000 to Inyo County in mid-October to pay for the county’s investigation of activities at Yucca Mountain, Nev., proposed site of the nation’s first high-level nuclear waste repository.

The money is a portion of millions divided among 10 “affected units of local government,” the other nine being in Nevada. Each year, Inyo County will receive more federal money to study possible impacts of the proposed repository.

Water taking its time in Owens River Gorge

Water released into the long-dry Owens River Gorge on June 28 from Los Angeles’ upper gorge power plant still has not completed the 10-mile descent into Pleasant Valley Reservoir.

A Los Angeles Department of Water and Power spokesman said the water is disappearing into the ground at the “horseshoe” six miles down. A portion resurfaces below for a half mile.

Tri-Valley considers Running Springs permit

The Tri-Valley Groundwater Management District, in Mono County, is considering an application from Running Springs for a permit to extract water from a Benton Valley spring for bottled water export.

Running Springs proposes to extract 150 acre-feet maximum from the new site, although vice president Tom Colson said it will take the fledgling company “several years to get to our maximum capability.”

Running Springs has operated out of Bishop for several years, bottling water extracted from a spring on a neighboring ranch. The company began extracting water from this site before the Tri-Valley Groundwater Management District formed and thus a permit was not required.

Colson said the spring to which they wish to move their operations comes from the same groundwater aquifer as the spring they are extracting from but is farther north on another ranch.

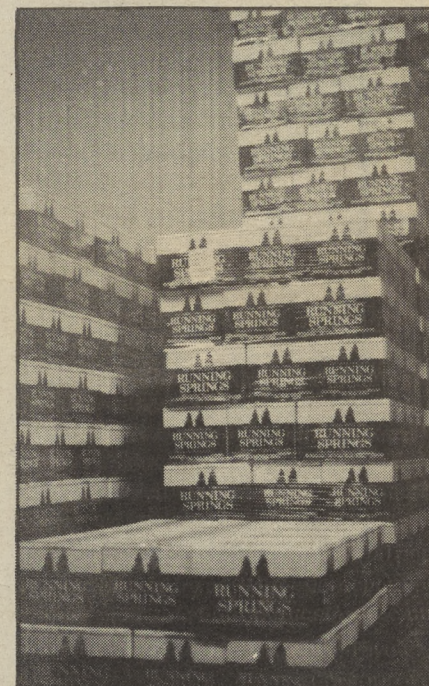
“It’s the highest spring, so there would be no agriculture around us,” he said. “I’ve heard tell there’s a cricket coming our way. We’re worried about pesticides getting into our water.”

He said another advantage to the new site is that Running Springs could own the property it is on. The 100-acre ranch, which has been fallow for several years, is for sale and Running Springs has made an offer.

“They’ve already drilled the well and the property’s in escrow now,” said Dan Lyster, Mono County’s energy management director and member of the Tri-Valley board.

Colson said if Tri-Valley doesn’t approve the permit, Running Springs will “drop the whole thing.”

“We do have another source,” he said. “But we do like where we’re at and we’d like to stay.”



He declined to say where the other source would be, except that it is not in the Tri-Valley area.

If Running Springs gets the permit and buys the property, Colson said the land “would be left natural” and not be farmed.

Lyster said the Tri-Valley board has some reservations about the proposed project, but he doesn’t think the board is worried about the amount of water Running Springs wants to extract, which is considered minimal.

“It’s the precedent,” he said. “They don’t want [the Los Angeles Department of Water and Power] to come in.”

Lyster said Mono County Counsel Jim Reed is considering drafting an ordinance that would exempt minimal uses from the permitting process and prohibit the use of surface conveyance facilities, limiting export to trucking.

Water Reporter

is produced by the Inyo County Water Department in Bishop, Calif. and published once a month in the Inyo Register.

Department Director: Greg James
Newsletter Editor: Heidi Walters

If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

Court, from front page

ordered Los Angeles to write an EIR in 1973. It was completed in 1976 but ruled inadequate in 1977. A second EIR, com-

Water Reporter

Inyo County Water Department

Volume 4 Number 8

September 20, 1991

INYO/L.A. WATER AGREEMENT:

Protecting the environment of the Owens Valley

Protection of the Owens Valley's environment will become the primary goal of water management if a proposed long-term agreement between Inyo County and Los Angeles is approved.

Under the agreement, the Los Angeles Department of Water and Power is required to manage its groundwater pumping and surface water activities in a way that does not harm the Owens Valley's environment. It will protect groundwater dependent and riparian vegetation as well as rare and endangered species.

Also, it has provisions to avoid groundwater mining, and to protect private wells and the Bishop Cone. LADWP is also required to implement several projects including restoring water flow in more than 50 miles of the lower Owens River.

Since Fall 1988, Inyo County and LADWP have been operating under many of the proposed agreement's management provisions. This has meant that Los Angeles has turned off groundwater pumping wells to allow water table recovery and to protect vegetation. And, it has meant increased vigilance by Inyo County through an extensive monitoring program.

Now it is time for Inyo County and Los Angeles to consider the agreement for final approval.

Given the importance of the agreement, this issue of Water Reporter seeks to help the citizens of Inyo County understand what the proposed agreement is about and how it will affect the Owens Valley if approved.

The agreement is the result of years of study and of hundreds of negotiation sessions in Inyo County and Los Angeles. The negotiations, begun in the mid-1980s, constituted a cease-fire in a battle with fiery beginnings.

Nearly 80 years ago, LADWP bought most of the land and water rights in the valley and built its first aqueduct. In the 1920s, angry citizens bombed it repeatedly.

After LADWP completed a second aqueduct in 1970 and increased groundwater pumping and surface water diversions in the Owens Valley to fill it, another bombing occurred. But by then, the battle was shifting from explosives to the courts.

In 1972, Inyo County sued Los Angeles over its expanded groundwater pumping because it was damaging the valley's vegetation and drying up springs and artesian wells. The lawsuit demanded that Los Angeles be ordered to comply with the



Verifying the data — Rick Puskar, the Inyo County Water Department's hydrology research assistant, uses an ultrasonic flowmeter monitoring device to measure the flow from a Los Angeles Department of Water and Power well.

California Environmental Quality Act, which requires an agency to write an environmental impact report (EIR) before conducting a project that could have a significant effect on the environment. The courts agreed with Inyo.

Although Los Angeles wrote two EIRs in the 1970s, the court ruled each inadequate. In 1980, Inyo County citizens adopted a groundwater ordinance to regulate groundwater pumping but it was ruled unconstitutional when challenged by Los Angeles. In 1984, lawsuits were temporarily set aside when Inyo and Los Angeles entered an interim agreement. Its primary goal was to jointly develop a long-term agreement on water management.

A third EIR has been written covering the agreement and Los Angeles' activities to supply the second aqueduct and is out for public review. On Oct. 15, the Inyo County Board of Supervisors will consider approval of the EIR and the agreement. If the agreement is approved, Inyo County will permanently assume a key role in protecting the environment of the Owens Valley.

This special issue of *Water Reporter* is devoted to describing the agreement and Inyo County's water future if it is approved.

Provisions guard valley's future

The proposed long-term agreement on water management represents a new direction in the relationship between Inyo County and Los Angeles: No longer can Los Angeles' water needs have priority over the overall environment in the Owens Valley.

The agreement's primary goal of protection of the Owens Valley environment will govern Los Angeles' and Inyo County's future management of groundwater pumping and surface water practices in the Owens Valley.

To meet this goal, the agreement provides for an extensive monitoring network, much of which is already in place (see back page).

Beyond protecting the environment, the agreement provides for such things as protection of private wells, release of certain Los Angeles lands in the Owens Valley, restoration of the lower Owens River, and more (see page 2).

If approved, the agreement would be an enforceable court order, locking in environmental protection for the Owens Valley and giving Inyo County a permanent voice in water management. However, it would not limit the existing legal rights of any person or entity.

Finally, the agreement provides that even if Los Angeles' future water supply from other sources is curtailed, the city may not terminate the agreement.

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What the water agreement provides:

Goal of environmental protection

A primary goal of the agreement is to manage water in the Owens Valley to protect the environment, including groundwater dependent vegetation and rare and endangered species.

Monitoring vegetation and groundwater pumping

Inyo County Water Department's technical staff independently and jointly with Los Angeles will monitor vegetation conditions, groundwater pumping amounts, water levels, surface water and spring flows in the Owens Valley in order to manage groundwater and surface water.

Avoidance of groundwater mining

Inyo County's hydrologists will monitor groundwater levels and annual recharge from the mountains to make sure no groundwater mining occurs.

Private wells

LADWP's groundwater pumping will be monitored and managed so that it does not affect water quality or quantity in private wells.

Bishop Cone

Groundwater pumping in this area, extending from north of Laws to north of Big Pine, will be in strict accordance with the Hillside Decree. Also, it will receive additional protections provided by the agreement. There will continue to be no pumping for export from this area.

Mitigation

If it is projected that pumping will cause an adverse environmental impact, pumping will be discontinued in that area to prevent damage. However, should a significant impact occur, within 12 months LADWP must implement a mitigation plan which would be developed jointly by Inyo County and Los Angeles.

Irrigation and in-valley water uses

LADWP lands that have been irrigated and other in-valley uses including recreation and wildlife protection that have received water since 1981 are assured a continuing water supply in the future.

Enhancement/mitigation and environmental projects

Existing projects, such as Buckley Ponds, Klondike Lake, Goose Lake, Millpond Recreation Area and others, will be continued.

Lower Owens River

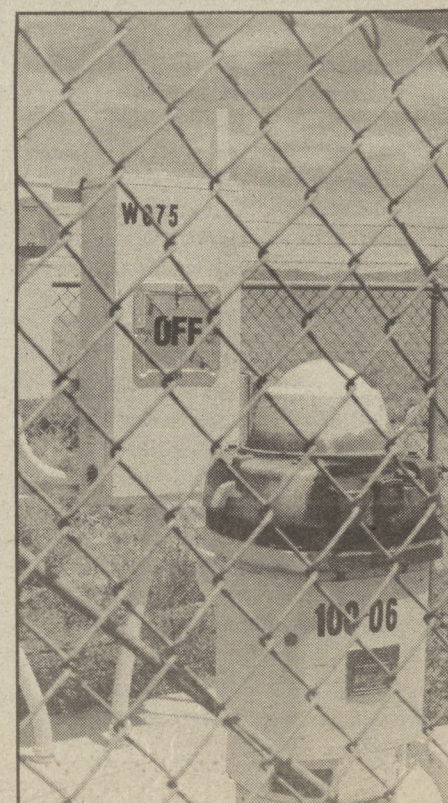
More than 50 miles of the lower Owens River and its riparian habitat will be restored to the benefit of wildlife and fish by a permanent increase in river flow.

Owens Lake

The existing environmental protection efforts of the Great Basin Unified Air Pollution Control District to abate dust from Owens Lake under tough federal and state clean air laws will not be affected.

Salt cedar control

Inyo County will conduct a program of salt cedar control funded by L.A.



Cooperative management

Inyo County and LADWP will jointly manage groundwater pumping and surface water to protect the vegetation and remaining springs in the valley.

Financial assistance

Inyo County will receive more than \$2 million a year from LADWP to implement and enforce the agreement and to offset losses to the tax base caused by Los Angeles' ownership of valley land. The county also will receive \$2 million to upgrade parks and recreational facilities. The City of Bishop will receive more than \$125,000 annually.

Future aqueduct capacity

Los Angeles may not build a third aqueduct to carry water from Inyo County, nor increase the capacity of the existing aqueducts.

Town water systems

The water systems for Lone Pine, Independence and Laws will be returned to local control. Before the transfer, LADWP will upgrade each system. Afterward, LADWP will supply free water to the systems.

Big Pine ditch system

LADWP will provide water and \$100,000 to Big Pine to rebuild and upgrade its ditch system.

L.A.-owned land releases

Los Angeles will release some of its land for orderly public and private development.

Dispute resolution

Disagreements between Inyo and LADWP will be handled by binding dispute resolution. A final judgement in an unresolved dispute will be made by Inyo County Superior Court.

Acknowledgement of water supply uncertainties

Even if Los Angeles' other water supply sources are curtailed, the agreement between Inyo and LADWP will not be terminated.

Bishop Cone remains protected

For more than a half century, an area surrounding Bishop called the Bishop Cone has been subject to the pumping restrictions of a legal judgment commonly known as the Hillside Decree.

The proposed Inyo/Los Angeles water management agreement reaffirms this 50-year-old court judgment by providing that future groundwater pumping by Los Angeles "will be in strict adherence to the provisions" of the Decree.

Not only does the Hillside Decree remain intact, but the agreement, which provides protections for the entire Owens Valley, would apply to Los Angeles' groundwater pumping and surface water management practices on the Bishop Cone.

During the long drought of the 1920s and early 1930s, property owners in the Bishop area sued Los Angeles for damages when its pumping caused pastures in the area to dry up. The state Supreme Court ordered Los Angeles to pay monetary damages.

Instead, in 1940 Los Angeles and the property owners entered into a court judgment called the Hillside Decree. Under this decree, Los Angeles agreed it would not pump groundwater for export from the Bishop Cone. The Bishop Cone is a

geographic area established by the court in the Hillside case, extending from Laws to north of Big Pine.

The decree does not prohibit Los Angeles from pumping groundwater or constructing wells on the Bishop Cone. But Los Angeles may only use pumped or flowing groundwater on its lands on the Bishop Cone.

Los Angeles also uses surface water on the Cone, diverted from Bishop Creek, other creeks and the Owens River, which combines with pumped water in ditches and canals.

Under the agreement, LADWP's use of water on the Cone downstream from its wells will be equal to or greater than any groundwater pumped or which flows from artesian wells upstream of the use.

To verify LADWP's compliance with the Hillside Decree and the agreement, Inyo County will independently monitor LADWP pumping, flow from artesian wells and uses on Los Angeles-owned land as part of an annual water audit on the Bishop Cone.

Inyo County also will monitor the vegetation and groundwater levels in this area.

Under the agreement, water on the Bishop Cone, as in the rest of Owens Valley, would be managed to maintain vegetation conditions approximate to those documented in a vegetation inventory conducted between 1984 and 1987. This time period followed several wet years in the valley and vegetation was at its healthiest in many years.

Also, continuation of existing irrigation and other in-valley water uses on Los Angeles lands throughout the valley will be assured.

The proposed agreement also requires that existing canals and ditches, which convey water across the Bishop Cone (and elsewhere in the valley), continue to be supplied with water. Continued use of these water courses will protect the fish, wildlife and the aesthetic values that depend on them.

Additionally, the proposed agreement and the Green Book contain strong provisions for protecting water quality and quantity in private wells. New wells will be sited to avoid impacts. An extensive monitoring network will be established between Los Angeles' wells and private wells to detect water table drawdown before it affects private wells.

Inyo and LA must consider documents for approval

The proposed long-term agreement between Inyo County and Los Angeles on water management in the Owens Valley will not go into effect unless Inyo County and Los Angeles approve it.

On Oct. 15, the Inyo County Board of Supervisors will decide whether the recently completed final environmental impact report (EIR) adequately describes the potential impacts of the agreement. Then the Board will consider the agreement for approval.

Before that, the supervisors and the Inyo County Water Commission will hear from their constituents concerning the proposed agreement and the final EIR at four public meetings in the Owens Valley.

The final EIR not only describes the potential effects of the agreement but also, as required by court order, the final EIR also analyzes the effects of LADWP's ac-

tivities to supply water to its second aqueduct which was completed in 1970. Thus, the EIR looks 20 years into the past as well as into the future.

The Los Angeles Board of Water and Power Commissioners and the Los Angeles City Council are expected to decide whether to approve the final EIR and the agreement on Oct. 15 and 16 respectively.

But before Los Angeles and Inyo County make their decisions on the agreement, each party must first prepare written findings on the final EIR.

Inyo County must prepare findings concerning the potential significant adverse environmental impacts under the proposed agreement. However, no such impacts are identified in the EIR.

On the other hand, Los Angeles must prepare written findings concerning each of the more than two dozen significant ad-

verse environmental effects identified in the EIR that has occurred as a result of its water gathering activities since 1970. (Up to about 2,000 acres are identified for revegetation to mitigate these effects.)

If they each certify the final EIR and approve the agreement, Inyo and Los Angeles will file the final EIR with an appellate court in Sacramento. That court must decide whether the EIR is legally adequate.

Also, if the Appellate Court approves the final EIR, the environmental litigation between Inyo County and Los Angeles, commenced in 1972, will be resolved.

If the Appellate Court approves the final EIR, Inyo County Superior Court will be asked to approve a stipulation and order (the agreement in legal form). If it is approved, the court will enter an order making the agreement a binding court judgment.

How EIR, Green Book and Agreement relate

Three key documents to protect the Owens Valley environment have been developed: a long-term agreement on water management between Inyo and Los Angeles, a technical manual for carrying out the provisions of the agreement, called the Green Book, and an environmental impact report.

The EIR is an informational document providing details of Los Angeles' water gathering activities, and related impacts, in

the valley from 1970 to 1990 and as proposed under the agreement.

The agreement sets forth the goals and provisions for managing Los Angeles' water gathering to protect the valley.

The Green Book details the scientific methods for carrying out the agreement. It will be updated or modified with corrections in the future to keep abreast of scientific progress.

"Search for Justice" video describes pact

The Inyo County Board of Supervisors has provided a 15-minute videotape explaining the long-term water management agreement between Inyo County and Los Angeles.

The video is available from these sources:

Television

The video will be aired from Sept. 16 to Oct. 14 on WestStar Cable, Lone Pine Cable and King 5 Cable television stations, under the following schedule:

WestStar:

Bishop: Through Oct. 14 nightly at 6:30 and again at 10:30. Also from Sept. 17-30 at noon, and from Oct. 1-14 at 12:30 p.m.

Big Pine: Week nights at 7:30 and again at 9:30

Independence: Frequently during the weekends of Sept. 21 and Oct. 5

Round Valley: Frequently during the weekends of Sept. 28 and Oct. 12

Lone Pine Cable:

Monday through Friday at 5:30 p.m., plus Tuesday at noon

King 5 Cable in Mammoth Lakes:

Nightly at 8 plus Tuesdays and Thursdays at noon

Free rental at video stores:

Bishop: Mountain High Video, 621 W. Line St.; Video Place, 251 N. Main St.; and Tiger Tote, 487 W. Line St.

Big Pine: Hi Country Market, 101 N. Main St.; Mountain View, 102 N. Main St.

Independence: Austin's General Store, 130 S. Edwards; Mather Sunland Service Station, 350 S. Edwards.

Libraries

Finally, the video may be checked out at the Inyo County libraries in Bishop, Big Pine, Independence, Lone Pine, Furnace Creek and the Tecopa Parks and Recreation office.

Inyo officials hold public meetings on EIR

The Inyo County Board of Supervisors and the Inyo County Water Commissioners will conduct joint **public meetings** to hear people's views on the final environmental impact report concerning water management practices in the Owens Valley:

Tuesday — Sept. 24 at the Civic Auditorium in Bishop

Wednesday — Sept. 25 at Statham Hall in Lone Pine

Tuesday — Oct. 8 at Big Pine Town Hall in Big Pine

Wednesday — Oct. 9 in the Board Meeting Room at the Courthouse Administrative Building in Independence

All meetings begin at 7 p.m.

Monitoring program is key to management

Vegetation monitoring

As a result of studies conducted over the past decade, Inyo County and Los Angeles have gained a better understanding of the relationship between groundwater pumping and Owens Valley vegetation.

In addition, a monitoring program in the valley has been established and improved upon which provides a vital tool in the management of groundwater pumping in accordance with the vegetation protection goals of the agreement.

The Inyo County Water Department and the Los Angeles Department of Water and Power have been studying the valley's plants for many years. As a part of these studies, from 1984 to 1987 LADWP plant specialists inventoried the vegetation on the valley floor.

Also since 1984, Inyo County and LADWP jointly have conducted an extensive experimental monitoring program to follow the plants' growth and survival from year to year at four sites.

The county also has continuously measured water table levels during this period.

In 1987, Inyo County and LADWP began establishing monitoring sites within the valley's groundwater production well fields. These sites have been used to compare the water needs of the vegetation with the amount of water available in the soil. When inadequate soil moisture has been measured, pumps have been shut off to protect the vegetation.

This year, the monitoring program has been augmented with additional vegetation and water studies. The purpose is to fill in some of the gaps in earlier procedures and to evaluate the effectiveness of the monitoring since 1987, said Sally Manning, Inyo County's plant monitoring specialist.

Since 1987, the ongoing monitoring consisted of two main procedures: measuring plant leaf area using data from vegetation transects and measuring soil water potential using soil psychrometers. The monitoring staff continues to take monthly psychrometer (or soil water) readings at well field monitoring sites.

Vegetation leaf area monitoring has been greatly increased. Up to this year, measurements along 100 meter transects (or lines) have been run once, in June, at the 31 monitoring sites, and along 30 meter transect lines in April and August. This year, the April and August transect lines

MONITORING SITE — typically a small fenced area located in a well field and containing psychrometers, a 100-meter vegetation transect, and other monitoring equipment. So far, there are 31 permanent monitoring sites.

CONTROL SITE — similarly equipped to a monitoring site but it lies outside the range of drawdown by the wells. So far, there are six control sites.

TRANSECT — a straight line through vegetation. If a permanent transect, it is marked from point to point by fence posts.

POINT FRAME — a two-legged metal frame with a row of long metal pins set vertically at 30-centimeter intervals.

POINT-FRAME TRANSECT READING — a team of two researchers stretches a 100-meter measuring tape along the fence posts marking a transect. Then, one researcher aligns a point frame along the tape and lowers the long pins through the canopy of whatever plants lie on the transect. The other researcher records the number of times a pin contacts a live leaf and the species of plant contacted.

were lengthened to 100 meters. And, monitoring staff are taking monthly 100 meter transect measurements at eight sites.

Manning said the longer transect lines increase the accuracy and reliability of the field measurements. The monthly measurements provide data at shorter intervals, leaving fewer gaps in the data and thus less of a chance of missing the seasonal vegetation peak. Knowing the peak time of plant growth is useful in determining a species' water requirement.

Another addition to the monitoring program is the running of random measurements or line-point transects in selected parcels. This method was used during the 1984-1987 vegetation inventory and involved more than 2,000 parcels.

This year, the measurements are being run on all parcels containing monitoring sites as well as on parcels where impacts are suspected to have occurred or perhaps already have occurred, Manning said.

This re-inventory of the parcels allows for comparison between 1991 and 1984-1987 conditions, and provides a way to interpret data from point-frame transects.

LINE-POINT TRANSECT READING — This differs from a point-frame transect reading in that a point-frame is not used.

A team of two researchers stretches a meter tape along a randomly located transect. Then, while one researcher records results the other walks along the tape and, stopping at regular intervals, looks straight down from the point on the tape to the ground and determines if there is live plant cover within the line of sight. If so, the species is recorded.

PSYCHROMETER READING — at each of the original 31 monitoring sites there are four holes of different depths — 0.5, 1.5, 2.5 and 3.5 meters — in which psychrometers are placed in groups of three. A psychrometer is an instrument with two wires running through it.

When a researcher sends an electric current through the psychrometer, moisture from the surrounding soil condenses on the tip where the two wires meet and the researcher records the results.

By knowing other soil characteristics, scientists then can derive the amount of water in the soil available for plant use.

A new tool Manning is using is groundwater contour maps created by the county water department's hydrology staff.

There are two varieties of contour maps. One shows the depth to water and the other shows the change in depth to water over time in locations throughout the Owens Valley.

Depth to water literally means the distance between the ground surface and the surface of the water under the ground.

Each map reflects a portion of a United States Geological Survey topographic map covering the Owens Valley. The portions shown on the maps are areas of concern where Owens Valley vegetation must be managed to be protected from groundwater pumping.

"The question we're trying to answer is, have the plants in the well fields where the water table has been drawn down suffered more than the plants in control sites where the primary impact has been lack of precipitation," Manning said.

The answer to that question will affect future management in the Owens Valley.

Independent groundwater monitoring

One of the greatest concerns the public has with groundwater management in the Owens Valley is that the county has had to rely heavily upon data collected only by Los Angeles Department of Water and Power hydrographers.

This has changed, now that the county has a hydrologist and assistant hydrologist to independently collect data and conduct studies and monitoring as provided under the agreement.

Chief hydrologist Randy Jackson has expanded the hydrologic monitoring program to include everything from weekly well status checks (are they on or off?) to weekly measurements of well discharge.

Specifically, the projects his staff are conducting annually include:

- Once a week on/off status check on the 96 pump-equipped wells;
- Weekly confirmation of depth-to-water measurements;
- Monitoring rain gauge stations;
- Weekly measurements with an ultrasonic flow meter to determine well discharge within 2 percent of accuracy;
- Monitoring water levels in selected wells with continuous recording devices;
- Monitoring flow in surface water conveyances;
- Updating the hydrography of the valley floor by taking measurements in the 800 monitoring test wells;
- Developing groundwater level contour maps for different quadrangles throughout the Owens Valley;
- Monitoring spring flow at Rein-hackle Spring and other valley springs;
- Monthly measurements in 18 indicator wells to monitor water table recovery.

If you want to receive this newsletter in the future:

The Inyo County Water Department mailed this special issue of *Water Reporter* to all registered voters in Inyo County as well as to regular subscribers.

If you enjoyed reading this newsletter and would like to be put on the mailing list to receive future issues, please call or write (see phone number and address, below). You also may request back issues.

In *Water Reporter* you will find information not only on the Inyo County/Los Angeles water agreement but also on other water issues in the eastern Sierra.

Such issues include the proposed nuclear waste repository at Yucca Mountain, Nev., Anheuser-Busch's proposal to export groundwater from southern Inyo County, and Mono Lake.

Water Reporter

Produced by the Inyo County Water Department in Bishop, Calif., and published the third Wednesday of every month in the Inyo Register.

Department Director: Greg James

Newsletter Editor: Heidi Walters

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Water Reporter

INYO COUNTY FREE LIBRARY

Inyo County Water Department

Volume 4 Number 6

August 14, 1991

Final EIR released; board sets decision date

New document responds to public comments on Draft

Using valuable suggestions gleaned from more than 1,500 comments, Inyo County and Los Angeles have completed their environmental impact report concerning water management practices in the Owens Valley.

They finished writing responses to the comments and making revisions last week and now the result, the final EIR, will be released to the public today.

An initial 200 copies of the final EIR will be available at first. At least 200 more copies will become available as they come from the printer in San Francisco.

As explained in the Introduction to the final EIR, it is a compilation of information examining the "environmental effects of all water management practices and facilities that have been or will be implemented or constructed in the Owens Valley to supply water to the second aqueduct, including increased groundwater pumping."

Inyo County will use the EIR as an aid in deciding whether to approve the proposed agreement with the Los Angeles Department of Water and Power on water management in Inyo County.

When the public first saw the EIR, in its draft form in September 1990, the document contained two volumes. Volume I contained the bulk of the EIR, the chapters on vegetation, wildlife and other resources, and associated impacts and mitigations. Volume II contained the technical appendices, and the proposed agreement which has been converted into the form of a stipulation and order for judgment to be presented to Inyo County Superior Court. Plus, the Green Book was an attachment.

After reviewing the comments received from individuals, organizations and governmental bodies, Inyo, Los Angeles and EIP Associates (the firm which prepared the EIR) prepared yet another document called the Response to Comments document. This document contains responses to every written and oral comment received. It also contains a list of 60 master comments and responses, which address concerns expressed by many people or which are broad-based in scope.

EIP also prepared a chapter of revisions made to the text of the draft EIR in response to many of the comments. The new or revised text is identified, along with the page, paragraph and sentence number



For the plants — Under the drought recovery policy (see page 2) agreed upon between Inyo County and Los Angeles and explained in the final EIR, many groundwater pumps in the Owens Valley are turned off to allow for a substantial recovery in the water table and in soil moisture. Pump 75, south of Independence, is an example of this policy at work.

in which the text occurs in the draft EIR and the Agreement. These documents, plus the draft EIR, make up the final EIR.

You may pick up a copy of the final EIR, starting this afternoon, at the following locations: Inyo County libraries in Bishop, Big Pine, Independence and Lone Pine; Inyo County Water Department, 163 May Street in Bishop, and Los Angeles Department of Water and Power, 873 N. Main Street in Bishop. Copies will be available at the library in Furnace Creek and at the Tecopa Parks Office by Aug. 20.

Supervisors plan to vote on the water agreement Oct. 15

Allsup, Dean to conduct poll

After voting 3-2 not to place the proposed water management agreement between Inyo County and Los Angeles on the November ballot, the Inyo County Supervisors said they would seek an extension of the due date for the final environmental impact report to be delivered to the Third District Court of Appeal.

The final EIR, concerning water management practices in Inyo County, is due in court by Sept. 30. The supervisors and Los Angeles are requesting that the date be extended to Oct. 21.

This would allow the public at least 60 days in which to review the proposed agreement and the final EIR.

The proposed agreement is contained in Volume II of the draft EIR. It would govern how water, particularly groundwater pumping, is managed in the Owens Valley and Inyo County hereafter.

If the extension is granted, the supervisors will vote whether to approve the agreement on Oct. 15.

Before they make their decision, the supervisors plan to hold public meetings on the EIR and the proposed agreement.

Assuming there will be an extension, the board has tentatively set meeting dates for Sept. 24 and 25 and Oct. 8 and 9.

Supervisors Warren Allsup and Sam Dean have announced they will each conduct a mail poll of their constituents in Districts 1 and 3, respectively, on the proposed agreement. The poll will be conducted during late September and early October.

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Terms defined

Technical Group — Conducts studies and makes preliminary determinations under the proposed agreement. The Technical Group consists of five members chosen by the Board of Supervisors and five members chosen by Los Angeles. Regardless of the number of members in attendance at a meeting, Inyo County has only one vote, and Los Angeles has only one vote.

Standing Committee — Reviews and acts upon reports and recommendations from the Technical Group and attempts to resolve differences between Inyo County and LADWP.

Inyo County's representatives on the Standing Committee are: at least one member of the Inyo County Board of Supervisors, two Inyo County Water Commissioners, and three staff members.

Los Angeles' representatives on the Standing Committee are: at least one member of the Los Angeles City Council, the Administrative Officer of the City of Los Angeles, two members of the Board of Water and Power Commissioners, and three staff members.

As with the Technical Group, Inyo County and Los Angeles each have only one vote.

Proposed Agreement — Between Inyo County and Los Angeles on joint groundwater management in the Owens Valley. Would govern future water management practices by Los Angeles, with protection of the Owens Valley environment as the prime consideration.

Green Book — Technical manual describing methods for carrying out goals of proposed agreement.

Bishop Cone — The land included in the Bishop Cone is shown on the map on page 3. The term "Bishop Cone" is used in the Hillside Decree.

Hillside Decree — A stipulated judgment agreed to in 1940 in the lawsuit of Hillside Water Company v. the City of Los Angeles. By this stipulation, the City of Los Angeles agreed to a judgment prohibiting it from pumping, extracting, taking or transporting out of the Bishop Cone area any subterranean water from beneath the Cone area.

Chandler Decree — A judgment entered in 1922 in the lawsuit of Hillside Water Company v. William A. Trickey. It requires maintenance of minimum flows in Bishop Creek by releases from the upstream reservoirs.



Will remain — Reinhackle Spring, which rises along a fault line north of Lone Pine, is protected under Agreement and EIR.

Key responses clarify EIR issues

Besides responses to individual comments, the final EIR contains 60 responses to master comments. In this issue, we present the responses to several key master comments, plus two individual comments concerning water quality and post-1970 mitigation.

Drought recovery policy

COMMENT: The Drought Recovery Policy should be strengthened to cause recovery of soil moisture to the estimated needs of the vegetation at the time it was inventoried between 1984 and 1987.

RESPONSE: The Draft EIR, on page 10-70 paragraph three, provides:

Recognizing the experimental nature of the management and mitigation techniques, and under the severe conditions of the current drought, it has been agreed by LADWP and Inyo County to conservatively manage groundwater pumping during this drought and during a period of recovery following the drought.

LADWP and Inyo County have agreed that the following policy will govern future groundwater pumping:

Recognizing the current extended drought, the Standing Committee establishes a policy for annual management of groundwater pumping during this drought. The goal of this policy is that soil water within the rooting zone recover to a degree sufficient so that the vegetation protection goals of the Agreement are achieved.

To this end, groundwater pumping during this drought, as well as the period of recovery, will be conducted in an environmentally conservative manner, taking into

consideration soil water, water tables, and vegetation conditions.

It is recognized that soil water in the rooting zone is naturally replenished by precipitation and from the water table. Further, soil water, water tables, and vegetation conditions will be monitored by the Technical Group to ensure that the goal of this policy is being achieved and for the purposes of evaluating the effectiveness of the existing well turn-off/turn-on provisions.

The Standing Committee has adopted the following clarification to the Drought Recovery Policy concerning the establishment of annual pumping programs:

The purpose of this clarification is to provide guidance to the Standing Committee for establishing annual pumping programs during the current drought as well as during a period of recovery.

It is intended that groundwater pumping will continue to be conducted in an environmentally conservative manner as was done during the 1990-91 and 1991-92 runoff years until there has been substantial recovery in soil moisture and water table conditions in areas of Types B, C, and D vegetation (as defined in the Green Book) that have been affected by groundwater pumping. The Standing Committee will establish annual pumping programs based on an evaluation of current conditions, including soil moisture level, water table depth, degree of water table recovery, soil type, vegetation conditions, the results of studies pertaining to vegetation recovery, and compliance with the goals of the Agreement.

It is probable that this policy will result in reduced annual pumping programs as

compared to annual pumping programs based solely on soil moisture conditions.

Reinhackle Spring

COMMENT: Preserve Reinhackle Spring because it is the last of its kind in the valley.

RESPONSE: At Reinhackle Spring groundwater from wells that affect spring flow will be managed so that flows from the spring will not be significantly reduced compared to flows under prevailing natural conditions.

In addition, all of the provisions for protecting springs, described in the following master response and contained in the Agreement and the Green Book, will be applied equally to Reinhackle Spring.

Protection of springs

COMMENT: The agreement lacks specific protections of remaining springs and seeps and should be amended to include this.

RESPONSE: For the purposes of this response, the "remaining springs" in the Owens Valley are those springs other than: Fish Springs, Big and Little Seeley Springs, Hines Spring, and Big and Little Blackrock springs. (Reinhackle Spring is addressed in another master response.) Management provisions for the vegetation associated with these areas can be found in the Agreement and Green Book. Mitigation measures for significant impacts to these areas caused by the project are described

Expert: Hillside, Chandler decrees not violated by water agreement

Professor Joseph Sax, of the University of California, reviewed the Chandler and Hillside decrees upon the request of Inyo County and, based on an interpretation of these decrees and of California water law, found that neither one is violated by the proposed Inyo/Los Angeles water management agreement.

Sax provided legal opinions in response to four questions regarding the two decrees and the proposed agreement:

- Is Los Angeles obliged to use prior appropriation surface water rights it owns in Bishop Creek solely on its lands in the Bishop area?

Answer: No.

- May Los Angeles extract groundwater from beneath its lands overlying the Bishop Cone?

Answer: Yes.

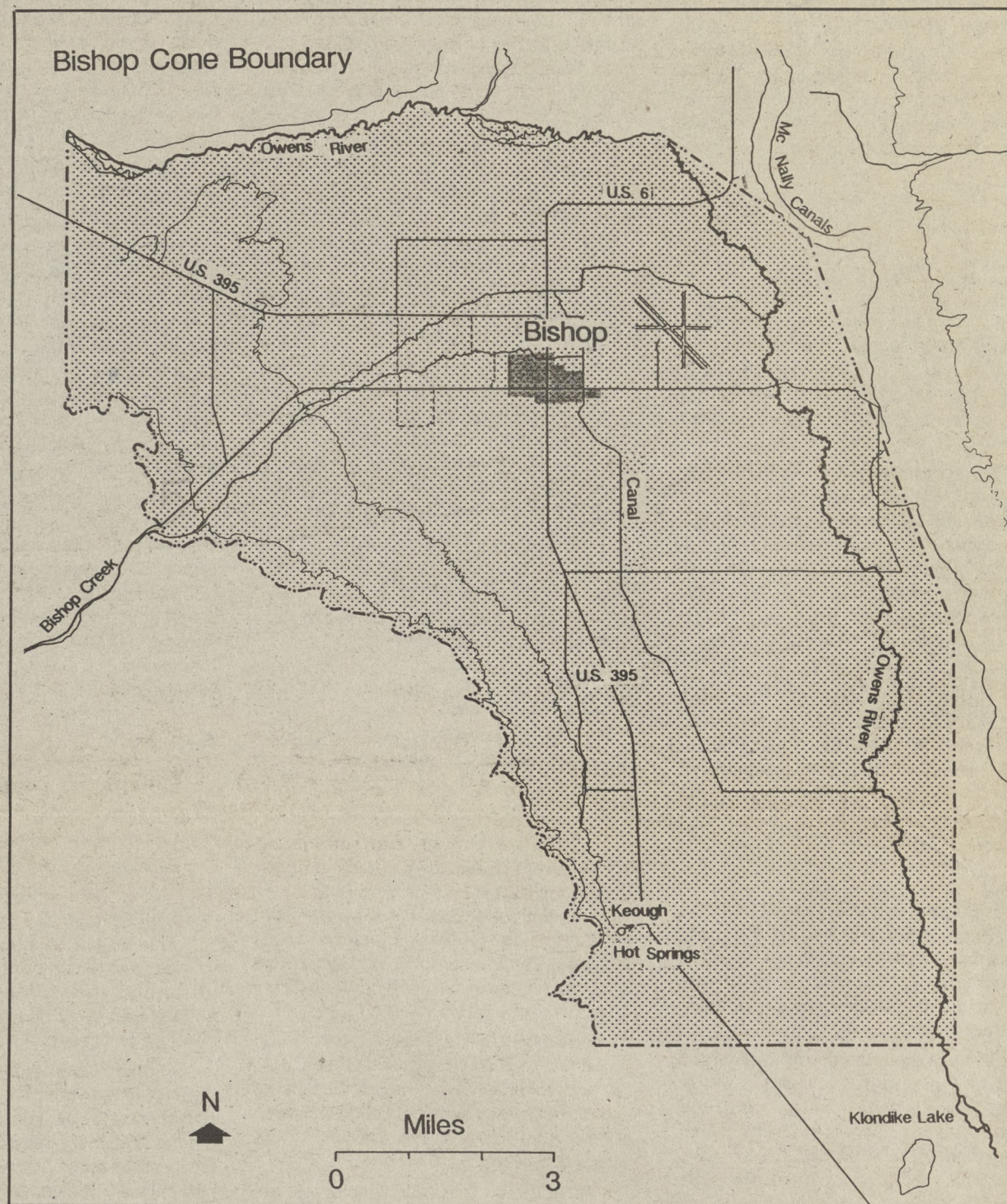
- If the answer to question 2 is yes, what limits are there on the amount of water that may be extracted?

Answer: The amount of water it extracts may not exceed the amount consumptively used (use includes transmission losses) on the overlying land. Los Angeles may not extract groundwater for the purpose of transporting it out of the Bishop Cone area.

- Is Los Angeles obliged to use its surface water rights in Bishop Creek to maintain at capacity its ditches used for irrigation of land overlying the Bishop Cone?

Answer: No.

Sax's letter, which delves even further into these questions, is in Appendix A-4 of the Response to Comments document of the EIR.



Responses, from page 2

in the Impact and Mitigation sections of the Water Resources and Vegetation chapters of the Draft EIR.

Under the provisions of the Agreement and the Green Book, spring flows and vegetation dependent upon such flows will be carefully monitored by the Technical Group.

The Green Book contains procedures for determining the effects of groundwater pumping and surface water management practices on spring flow (pages 24-26).

Groundwater pumping from existing and new wells will be managed to avoid reductions in spring flows that would cause significant decreases or changes in spring associated vegetation.

If despite such management, significant decreases in spring flows occur that could cause significant decreases or chan-

ges in vegetation dependent upon such flows, management of groundwater pumping from wells affecting flow from the spring will be modified so that adequate spring flow resumes to supply the vegetation. Also, the Technical Group would determine an appropriate course of action which might include:

- a. temporarily supplying surface water or groundwater of a quality that would restore and sustain the vegetation until adequate spring flow resumes;

- b. revegetating the affected area if necessary.

Concerning seeps, Section I.D.1 of the Green Book (page 31) provides:

Certain vegetation of significant environmental value [is] not shown on the management maps because [it is] not the dominant species. This vegetation will be

identified by the Technical Group for monitoring purposes on overlays to the management maps.

Areas of this vegetation include riparian vegetation dependent upon springs and flowing wells, stands of tree willows and cottonwoods, and areas with rare or endangered species.

The monitoring sites will be located in areas where there is a potential for impact to such vegetation by groundwater pumping or changes in surface water management practices (although certain areas of rare or endangered species will be monitored, these areas will not be publicly identified on the management maps in the interest of protecting such vegetation).

If, through field observation, monitoring, and other evaluations, it is determined that groundwater pumping or changes in sur-

face water management practices [have] resulted in severe water deficit stress that could cause a significant decrease or change in this vegetation, the Technical Group will take such action as is feasible and necessary to prevent significant impacts and to reduce any impacts to a level that is not significant.

Section I.D.2. (page 32) and Section I.D.3. (page 33) of the Green Book describe how this vegetation will be monitored and how mitigation plans will be developed for this vegetation, if necessary.

Bishop Cone

COMMENT: The pumping on the Bishop Cone that would be allowed under

See Bishop Cone, back page

Bishop Cone, from page 3

the Agreement would be for export and thus in violation of the Hillside Decree.

RESPONSE: Section VII.A (page B-32 and B-33) of the Agreement provides that groundwater pumping on the Bishop Cone will be in strict adherence with the Hillside Decree. This comment raises a legal, rather than an environmental, question.

The Hillside Decree is a stipulated judgment agreed to by the parties to the lawsuit of Hillside Water Company v. the City of Los Angeles, 10 Cal. 2d 677. By this stipulation, the parties settled the lawsuit and the City of Los Angeles agreed that the Superior Court could enter a judgment prohibiting it from pumping, extracting, taking or transporting out of the Bishop Cone area any subterranean water from beneath the Cone area.

The judgment further provided, however, that it did not in any manner prevent Los Angeles from, among other things, using existing drainage ditches to the full extent of their normal capacity or from pumping groundwater as may be reasonably necessary for beneficial use on City lands located within the Bishop Cone, or of making beneficial use within the Cone of water underlying City lands as are enjoyed by other landowners.

Under the Agreement, annual groundwater pumping by Los Angeles on the Bishop Cone cannot exceed annual water use on Los Angeles-owned lands on the Cone. From a water supply perspective, all wells on the Cone discharge water into ditches, canals, and other conveyance facilities. The beneficial uses of water on Los Angeles-owned lands on the Cone downstream of these wells is now, and will remain in the future, equal to or greater than the amount of groundwater pumped from the wells.

Although the groundwater discharged from a well may be commingled in a conveyance facility with surface water, the beneficial uses of the water on the Cone downstream of the well will utilize all of the groundwater pumped upstream from the Cone.

Therefore, current and proposed future pumping from the Bishop Cone is and will be in accordance with the Hillside Decree.

Compliance with the Decree will be verified by Inyo County through an annual audit of all groundwater pumping by Los Angeles and all uses on Los Angeles-owned lands on the Bishop Cone.

Some commentators have voiced an opinion that under the "Chandler Decree" of 1922, Los Angeles is prohibited from exporting any water from Bishop Creek out of the Bishop area, and is required to divert and use such water on its lands on the Bishop Cone.

Opinions on how a court would rule on this interpretation of the Chandler and Hillside Decrees have been prepared by Professor Joseph Sax of the University of California, an eminent authority on water law and the public trust doctrine, and by Inyo County's special legal counsel, Antonio Rossmann.

They have concluded that the Chandler Decree does not prohibit Los Angeles from exporting the waters of Bishop Creek from the Bishop area, nor does it require Los Angeles to divert and use such waters on its lands on the Bishop Cone. They also conclude that the Agreement does not violate the Hillside Decree.

These opinions are presented in Appendix A-4 of the Response to Comments document.

See story, page 3, for a summary of Sax's opinion.

Groundwater quality

COMMENT: The five new well sites in the Bishop area raise significant concerns. The shallow groundwater quality in the City of Bishop is of questionable quality overall.

The Inyo County Environmental Health Department has documentation from numerous monitoring wells and excavations of soil/groundwater contamination from the following chemicals: Benzene, Toluene, Xylene, Ethylbenzene, total petroleum hydrocarbons (as diesel), Trichloroethylene (TCE), and Tetrachloroethylene (PCE).

These pollutants have not been addressed regionally, but rather they have been observed on specific sites which are not representative of the entire City of Bishop as a whole.

In addition, the outlying areas of Bishop also have not been evaluated as a whole.

Therefore, this entire region could have unknown locations of organic chemical contamination, originating from present and past petroleum service stations, commercial businesses using hazardous materials, agricultural uses of pesticides, septic tank and sewage systems, landfill operations, etc.

The construction of these five new wells could initiate possible vertical migration of pollutants, and if pumped, the draw-down of the shallow groundwater table could also have a dramatic effect on movement of pollutants presently floating on top of, or already in mixture with the groundwater.

These areas should be monitored and any impacts from new wells mitigated.

RESPONSE: The pollutants listed and the potential for movement are valid concerns. The Technical Group is aware of the pollution problem.

The Agreement and Green Book contain provisions regarding the siting of new wells and management of groundwater pumping to avoid effects on water quality. Section IV.B. (page 97) of the Green Book sets forth the guidelines for siting and activating new wells.

In response to the concerns expressed in this comment, new wells on the Bishop Cone will be sited, and all wells will be operated to avoid aggravating the existing pollution problem. The primary means of avoiding the problem would be through management of groundwater pumping based on actual and projected fluctuations in water tables.

Aerial photo study

COMMENT: Use the Jaques report on aerial photo study for pre-project and vegetation impact analysis.

RESPONSE: The report by Dennis Jaques was reviewed during the preparation of the draft EIR.

That report identified general locations around the valley floor in which changes have occurred or may have occurred, as defined by a discernible change in vegetation type or density.

The EIR team considered the main findings of the Jaques analysis in the draft EIR; however, as Jaques acknowledged, the study did not specifically address effects of the second Los Angeles Aqueduct, but only addressed the observation that some vegetation changes had occurred.

During the preparation of the final EIR, two additional technical experts in the field of air photo interpretation, Dr. Paul Tueller and Dr. Robert Colwell, were contacted for an opinion regarding analysis of the photos available at the present time.

Those experts suggested that there are several benefits to such an analysis, but cautioned that there are also certain limitations that tend to reduce their interpretability, such as: (1) inadequate resolution, (2) inadequate scale of the

photos for accurate interpretation, (3) one set of photos is black and white, taken in July 1968, while the other is color, taken in September 1981, and (4) as Jaques noted, there were differing amounts of precipitation in the months preceding each set of photos.

The letters received from Jaques, Tueller and Colwell are presented in Appendix B-2 of the Response to Comments document.

In summary, in addition to Jaques' report, the other information sources used in the pre-project setting and impact analysis include: (1) reports and letters supplied by both LADWP and the Inyo County Water Department; (2) past environmental impact reports filed by the City of Los Angeles; (3) field surveys conducted by EIP Associates personnel; (4) conversations with noted experts and knowledgeable residents; (5) aerial photographs taken in 1968, 1973, 1981, and 1988; (6) herbarium and library research at both the California Academy of Sciences, San Francisco, and the University of California at Berkeley; (7) a vegetation cover map compiled in 1973 by Earth Sat, Inc., and associated report; and (8) sources of historical information.

Because of the information obtained from Tueller, Colwell, and Jaques, and for the reasons presented on page 10-27 and 10-28 of the draft EIR, an analysis of aerial photographs was not the primary method of establishing pre-project vegetation conditions. However, aerial photographs can be valuable monitoring tools.

To determine their utility in monitoring the Owens Valley vegetation, a cooperative study will be undertaken by LADWP and Inyo County, with experts in the field of aerial photo interpretation. This study will analyze existing aerial photos as part of an evaluation of the merits of using aerial photo analysis as an ongoing monitoring technique.

Mitigation, post-1970

COMMENT: The EIR should allow for mitigation of areas damaged since 1970 that are discovered after this process has concluded. For example, if a new study of the pre-1970 aerial photos showed clearly that damage had occurred due to groundwater pumping or changes in surface water management, the damaged area shall be mitigated.

RESPONSE: If in the future, it is determined that an area has been significantly affected since 1970, mitigative actions would be implemented under the Agreement.

Why a 60-day public review period?

Although not required by law, the Inyo County Board of Supervisors has established a 60-day public review of the final EIR and the proposed agreement.

This period offers members of the public the opportunity to study the two documents and to inform the supervisors of their opinion as to whether the supervisors should approve the proposed agreement.

Opinions may be offered at one of four public meetings or directly to the supervisors. The meetings have been tentatively scheduled for Sept. 24 and 25 and Oct. 8 and 9.

Copies of the final EIR may be obtained at all Inyo County libraries, the Inyo County Water Department and the Los Angeles Department of Water and Power in Bishop.

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If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

Water Reporter

April 17, 1991

Volume 4 Number 3

Inyo County Water Department

Standing Committee tentatively OKs 1991-1992 pumping program

For the second consecutive year, annual groundwater pumping by the Los Angeles Department of Water and Power (LADWP) will not exceed annual in-valley uses, according to the 1991-1992 pumping program tentatively approved last Thursday by the Inyo County/Los Angeles Standing Committee.

The committee met in Los Angeles.

Greg James, Inyo County Water Department Director, said Los Angeles will pump up to 87,000 acre-feet during this runoff year, from April 1, 1991 to March 31, 1992. This is 2,500 acre-feet less than the 89,500 acre-feet maximum LADWP pumped last runoff year.

At least 87,000 acre-feet of water will be supplied for in-valley uses, including: enhancement/mitigation projects which will receive 2,000 acre-feet more than they received last year, bringing their allotment to 20,000 acre-feet; recreation and wildlife uses which will receive the same amount as last year, about 9,000 acre-feet; stock-water uses which will amount to about 14,000 acre-feet, the same as last year; and irrigation which will receive about 42,000 acre-feet.

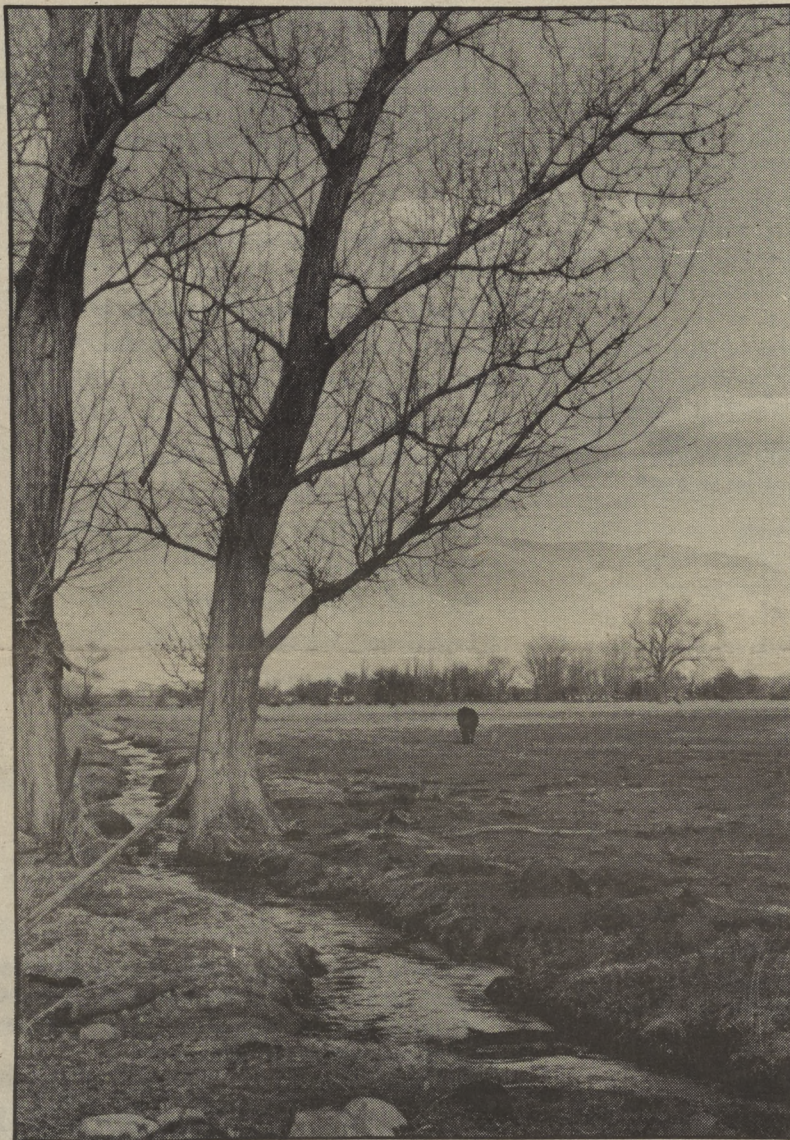
The irrigation allotment will be about 90 percent of the amount supplied to each LADWP lessee will in a normal year.

James said the conservative pumping program should allow water tables to continue a recovery which began last year. He said that even with the extremely low runoff last year, the relatively low pumping of 89,500 acre-feet of groundwater resulted in a rise in water tables in all valley well fields.

Randy Jackson, Inyo County hydrologist, agreed that with a maximum of 87,000 acre-feet of pumping and an additional 40,000 acre-feet of recharge from a higher forecasted runoff this runoff year, water tables are projected to continue to rise in all well fields.

"Water tables will continue to rise, with the possibility of recovery to 1984-1987 levels in several of the southern valley well fields," Jackson said.

Last year, runoff into Long Valley, Mono Basin and the Owens Valley was 66 percent of normal. This year's April to March runoff is expected to about 75 percent of normal with a forecasted 407,100 acre-feet. Last year's runoff recharged the Owens Valley with about 101,000 acre-feet,



Irrigated fields such as this one off of Sunland Drive in Bishop will receive 90 percent of normal water supply this growing season thanks to heavy snowfall in late February and in March which improved the runoff and groundwater recharge scenario for the Owens Valley.

while this year's recharge is estimated to reach almost 140,000 acre-feet.

Improved soil water conditions resulting from March precipitation should help the valley's vegetation, much of which has suffered from a combination of drought and groundwater pumping.

Sally Manning, Inyo's plant monitoring specialist, said recent precipitation has helped the plants begin new growth.

Manning said water table and soil water recovery to the levels that existed when the vegetation was mapped (1984-1987) will create conditions for possible plant recovery.

Survey reveals public opinion on agreement

Inyo County received results of a public opinion survey concerning the proposed Owens Valley water management agreement between Inyo and the Los Angeles Department of Water and Power. (See full results on pages 2, 3 and 4.)

The county commissioned the study in order to better understand the public's views on the agreement and many of its key components, said Greg James, director of the Inyo County Water Department.

Solem and Associates, a public affairs and research firm which performed the survey, interviewed 602 registered voters between March 28 and April 7. The firm used sampling techniques that were designed to so that a statistically representative sample of the entire county was included in the study.

Virtually all (94 percent) of the respondents had heard of the proposed water management agreement, although no more than one quarter (25 percent) had actually read either the agreement or any part of the draft environmental impact report. Most respondents said their primary sources of information about the agreement have been newspapers as well as friends and the radio.

Toward the beginning of the interview, each respondent was asked whether he or she felt the proposed water agreement would be favorable or unfavorable to Inyo County. Based on individuals' knowledge before the interview, 20 percent said the agreement would be favorable, 49 percent said it would be unfavorable, and 32 percent said they weren't sure.

Solem and Associates said that because the majority of respondents had not read the agreement or the draft EIR, many learned more about the agreement during the survey than they had known prior to the interview. To see if their opinion about the agreement changed after receiving more information, respondents were asked again at the end of the interview whether they felt the agreement was favorable or unfavorable for Inyo County.

The results show a considerable change in attitudes: 45 percent said the agreement would be favorable, 31 percent said it would be unfavorable, and 24 percent said they weren't sure.

Solem and Associates said these results suggest there are many aspects of the agreement the public needs to know more about before a final decision can be made.

In fact, 70 percent of the respondents said they would like to receive more information about the proposed agreement and draft EIR, preferably through the mail and in newspapers.

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Water management agreement survey results

1. What would you say is the major problem facing people in your area?

Local economy/unemployment/jobs	43%
Drought/lack of rainfall/lack of snow	20
Exporting water to Los Angeles	9
Groundwater pumping	2
High cost of housing/affordable housing	2
Quality of education	2
Drugs/cocaine/crack	2
Dust	1
Transportation/traffic/traffic congestion	1
Cost of medical care	1
Poor quality of elected officials	1
Owens Valley	*
Environment — general	*
Pollution — other than water pollution	*
Mental health services	*
Other	6
No major problem in area	7
Not sure	4

2. Overall, during the last three years do you feel the quality of life in Inyo County has gotten better, stayed about the same or gotten worse?

Gotten better	16%
Stayed about the same	55
Gotten worse	27
Not sure	2

3. Have you heard of a proposed Owens Valley water management agreement between the County of Inyo and the Los Angeles Department of Water and Power?

Yes	94%
No	5
Not sure	1

4. The County of Inyo and Los Angeles have released to the public a proposed water management agreement for Owens Valley. Based on what you know about the proposed agreement, do you feel that it will be favorable or unfavorable for Inyo County?

Favorable	20%
Unfavorable	49
Not sure	32

5. What are your greatest concerns, if any, with the proposed water agreement?

DATA NOT AVAILABLE YET

6. EIP Associates, an environmental consulting firm, prepared and released to the public a draft environmental impact report, often called an EIR. This EIR describes the environmental effects of the proposed water agreement and of Los Angeles' water gathering in Owens Valley. Have you, personally, had the opportunity to read any part of the EIR?

Yes	25%
No	74
Not sure	1

7. What have been your primary sources of information about this proposed water agreement and the EIR?

Newspaper	69%
Friends	24
Radio	21
Television	20

Public meetings/hearings	11
Books	10
Read all/part of EIR	8
Clubs/organizations/interest groups	5
"The Green Book"	2
Information received in the mail	1
None/No source	3
Don't know	1

8. I am going to read you the names of some people and organizations that might be concerned with the proposed water agreement. As I read each name, please tell me whether you would find that person or organization generally believable or generally not believable. If you have never heard of the person or organization, just let me know.

	Believable	Not believable	Never heard of	Not sure
A. Mono Lake Committee	68%	10%	6%	16%
B. Sierra Club	47%	33%	2%	17%
C. Bennet Kessler's radio newscasts	49%	17%	11%	22%
D. Inyo County Board of Supervisors	55%	23%	1%	22%
E. Inyo County Water Reporter	22%	7%	47%	24%
F. Inyo Register	64%	21%	1%	15%
G. Inyo County Cattleman's Assn.	41%	12%	16%	30%
H. Los Angeles Department of Water and Power	25%	59%	1%	16%
I. The Bristlecone Chapter of the Calif. Native Plant Society	44%	6%	28%	22%
J. Inyo County Water Department	54%	15%	5%	27%
K. An organization called "People Who Love the Valley"	31%	19%	30%	19%
L. EIP Associates, environmental consultants	22%	7%	39%	32%
M. Eastern Sierra Audubon Society	61%	10%	7%	23%
N. KIBS and KBOV News	71%	9%	5%	15%
O. Weststar Channel 12 News	44%	15%	11%	30%

9. There are many specific issues involved in the Owens Valley water management agreement. I'd like to read you a few short statements and have you tell me whether you "agree strongly," "agree somewhat," "disagree somewhat" or "disagree strongly" with each.

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly	Don't know
A. It would be better for Inyo County to go back to the courts than to approve the proposed agreement with Los Angeles.	26%	15%	13%	25%	21%
<i>Net</i>	<i>41%</i>		<i>38%</i>		
B. In the last four years, drought has had more of an effect on Owens Valley plants than groundwater pumping	27%	19%	17%	25%	12%
<i>Net</i>	<i>47%</i>		<i>41%</i>		
C. During periods of drought, irrigation water for Owens Valley should be reduced	21%	20%	17%	34%	9%
<i>Net</i>	<i>41%</i>		<i>51%</i>		
D. It would be better if Los Angeles stopped taking water from Inyo County and sold all of its land in Owens Valley.	34%	14%	16%	30%	6%
<i>Net</i>	<i>48%</i>		<i>46%</i>		

Survey, from page 2

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly	Don't know
E. It is acceptable to fix or restore one part of Owens Valley to make up for past environmental damage to another part of the valley.	11%	20%	17%	35%	17%
Net	31%		52%		
F. The water agreement must require that any groundwater pumping will not cause groundwater levels to fall below plant root zones.	75%	10%	3%	6%	6%
Net	85%		9%		
G. Los Angeles ownership and management of land has been important for maintaining the quality of life in Owens Valley.	34%	24%	12%	22%	8%
Net	58%		34%		
H. There should be no agreement unless it includes a solution for the Owens Dry Lake dust problem	62%	13%	8%	12%	6%
Net	75%		19%		
I. During periods of drought, there should be required water conservation in Owens Valley by residential users.	34%	31%	10%	22%	4%
Net	64%		32%		
J. The Inyo County Board of Supervisors should make the final decision on whether Inyo County should approve the proposed water agreement.	27%	25%	12%	30%	7%
Net	52%		42%		
K. Animal grazing has damaged the environment of Owens Valley and should be better managed.	16%	14%	21%	36%	13%
Net	30%		57%		
L. The proposed agreement will adequately protect the Bishop Cone.	14%	15%	11%	22%	38%
Net	29%		33%		

10. If Inyo County rejects the proposed water management agreement, would you support additional county taxes to fight against Los Angeles in court? Would you “definitely support,” “probably support,” “probably not support” or “definitely not support” additional taxes?

Definitely support	25%
Probably support	35
Net support	60%
Probably not support	10
Definitely not support	22
Net not support	31%
Not sure	9%

11. I am going to read you several possible elements of this proposed agreement between Los Angeles and the County of Inyo. For each one I read, I'd like you to tell me whether you think that element makes you feel “more favorable” about the agreement, “less favorable” about the agreement, or does it have “no effect.”

More favorable	Less favorable	No effect	Not sure/don't know
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A. Under the proposed agreement, water systems owned by Los Angeles would be returned to local town ownership. 64% 11% 11% 14%

	More Favorable	Less Favorable	No effect	Not sure/don't know
B. If joint monitoring shows there may not be enough water for plants or wildlife, then certain nearby pumping wells will be turned off.	84%	8%	4%	5%
C. Future groundwater pumping on the Bishop Cone must be consistent with the Hillside Decree.	47%	8%	7%	39%
D. Los Angeles will not construct a third aqueduct or enlarge the capacity of the two existing aqueducts.	76%	14%	7%	4%
E. The agreement will restore fish, plants and wetlands along 50 miles of the Lower Owens River.	83%	5%	6%	6%
F. Los Angeles will be able to construct 15 new wells in Owens Valley under the proposed agreement.	10%	78%	5%	7%
G. Los Angeles will provide over \$2 million annually for county services, including environmental and water-related programs and park improvements.	55%	18%	17%	10%
H. If approved, the environmental protections of the agreement will be promptly enforced by mediation and the courts.	67%	9%	9%	15%
I. Under the terms of the agreement, Los Angeles will sell selected areas of land in Owens Valley for public and private use.	61%	17%	13%	9%
J. Los Angeles' groundwater pumping and water exports will be monitored by Inyo County.	87%	5%	5%	4%

12. Now that you've heard more about the proposed Owens Valley water management agreement between the County of Inyo and Los Angeles, generally speaking, do you feel that this proposed agreement will be favorable or unfavorable for Inyo County?

Favorable	45%
Unfavorable	31
Not sure	24

13. Do you feel that economic development in Owens Valley should be increased, decreased or stay about the same? Is that a little or a lot?

Increase a lot	21%
Increase a little	40
Net increase	61%
Stay the same	33
Decrease a little	1
Decrease a lot	1
Net decrease	1%
Not sure	5

14. Do you feel that population growth in Owens Valley should increase, decrease or stay the same? Is that a little or a lot?

Increase a lot	9%
Increase a little	33
Net increase	42%
Stay the same	51
Decrease a little	2
Decrease a lot	1
Net decrease	2%
Not sure	4

Study, from page 3

15. Would you like to receive more information about the proposed water agreement and the environmental impact report?

Yes	70%
No	29%
Not sure	1%

16. Which of the following would be a helpful way for you to receive more information?

	Yes	No	Not sure
Television	66%	32%	1%
Radio	70%	28%	1%
A videotape describing the agreement and the EIR	65%	30%	5%
Information received in the mail	90%	8%	3%
Public meetings	54%	43%	3%
Newspapers	86%	12%	1%
Library	55%	40%	5%
Local clubs or organizations	50%	46%	4%
The "Water Reporter" published by the Inyo County Water Department	64%	20%	16%

17. Generally speaking, how would you describe yourself politically: as very conservative, somewhat conservative, moderate, somewhat liberal or very liberal?

Very conservative	14%
Somewhat conservative	39
Net conservative	53%
Moderate	26
Somewhat liberal	13
Very liberal	3
Net liberal	17%
Not sure	4
Refused	1

18. What is your age?

18-24	1%
25-44	10
45-54	18
55-64	18
65+	35
Refused	-

19. How long have you lived in Owens Valley?

Less than six months	*
Six months to one year	*
One to five years	8%
Net five years or less	9%
Five to 10 years	14
Over 10 years	77
Not sure	1
Refused	*

20. I am going to read you a list of income groupings. Would you please tell me which group comes closest to describing your total household income before taxes?

Under \$10,000	7%
\$10,000-\$19,999	15
\$20,000-\$29,999	17
\$30,000-\$39,999	18
\$40,000-\$49,999	13
\$50,000-\$74,999	14
\$75,000 and over	6
Refused	10

21. Would you consider yourself:

White	94%
Black	*
Hispanic or Mexican	2
Asian	*
Other	3
Refused	2

22. What is your occupation?

Retired	39%
Homemaker	6
Farm/ranch/construction/laborer	6
Small business owner	5
Manager/office manager/supervisor	5
Teacher/school administrator	5
Salesperson/sales rep./realtor	4
Secretary/administrative assistant	4
Medical/dental professional	3
Engineer/scientist	3
Lawyer/accountant/stockbroker	2
Service worker/housekeeper	2
Therapist/social worker/counselor/clergy	2
Police/fire/forestry/fishery	1
Farm/ranch owner	*
Student	*
Other	9
Unemployed	1
Refused	1

23. Are you a current or former employee of the Los Angeles Department of Water and Power?

Yes	6%
No	94
Not sure	1

24. What town are you in, or what is your closest town?

Bishop	69%
Big Pine	11
Lone Pine	11
Independence	5
Keeler-Darwin	1
Shoshone-Tecopa	1
Death Valley	1
Olancho-Cartago	1
Rovana	*
Other	1

Final EIR release set for June 20

A final environmental impact report on Los Angeles' water management in the Owens Valley is to be released to the public June 20, according to a mandate from the Inyo/Los Angeles Standing Committee which met last week in Los Angeles.

The public comment period for the draft EIR closed more than two months ago. Since then, EIP Associates of San Francisco, the firm which prepared the report, has reviewed the 2,000-plus comments received at meetings and in letters and is preparing responses.

EIP's Joel Sabenorio said the emphasis at this time is to develop master responses to master comments compiled from all the comments.

"The rationale behind this approach is to provide comprehensive and consistent responses," Sabenorio said. "Of course, individual comments will also be furnished with responses."

EIP expects to have a draft of all master responses ready for review by Inyo County and Los Angeles staff by the end of April.

The Inyo County Board of Supervisors said the June 20 release of the final EIR will give the public adequate time to review it before the document is considered for approval by Los Angeles and Inyo County and then submitted to the Third District Appellate Court. The EIR must be at that court by September 30, 1991.

Water Reporter

Published by the Inyo County Water Department in Bishop, Calif.

Department Director: Greg James

Newsletter Editor: Heidi Walters

If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

Water Reporter

December 2, 1990

SPECIAL EDITION : Public Meetings on Draft EIR

Inyo County Water Department

Public can shape EIR

The public plays an important role in determining the contents of an environmental impact report.

This is especially true for the EIR on water management in the Owens Valley which the Los Angeles Department of Water and Power and Inyo County have prepared.

The 1970 California Environmental Quality Act (CEQA) requires a governmental agency to document and consider the environmental implications of a project. An EIR is the primary method for doing this. And, CEQA provides the public with a role in the process.

The public review and comment period is underway for the Owens Valley draft EIR and the public has until Jan. 4, 1991, the end of the 90-day review period, to submit written comments. People also may offer oral comments at four public meetings held in the Owens Valley and at one public meeting held in Los Angeles.

Public involvement in the CEQA process began last year, when the agency helping Inyo County and Los Angeles prepare the EIR, EIP Associates of San Francisco, issued what is called a "Notice of Preparation" of an EIR and then held public scoping sessions. At these, EIP took suggestions from the public on what the EIR should include. From there, the suggestions became part of the base upon which EIP, Inyo and Los Angeles wrote the draft EIR.

All public comments will be considered in preparation of a final EIR. It is expected that the final EIR will be available for public review during spring 1991.

The Inyo County Board of Supervisors will hold public meetings on the final EIR and the proposed water agreement prior to consideration of approval of these documents.

The process does not end here. If the final EIR is approved by Inyo County and Los Angeles, it must then be submitted to the Court of Appeal for the Third Appellate District in Sacramento by Sept. 30, 1991. If the appeals court

EIR public meeting dates

In the Owens Valley:

These meetings begin at 7:30 p.m.

Dec. 4, Big Pine Town Hall

Dec. 5, American Legion Hall in Independence

Dec. 11, Bishop High School Auditorium

Dec. 12, Statham Hall in Lone Pine

In Los Angeles:

Dec. 13 at 7 p.m., at the LADWP Headquarters Building in downtown Los Angeles, 111 N. Hope St., Room 1555H (free parking in the DWP Hope St. customer parking lot)

Send your written comments to:

John Davis, Senior Vice President, EIP Associates, 150 Spear St., Suite 1500, San Francisco, Calif. 94105

approves the EIR and discharges its order requiring Los Angeles to prepare an EIR, the environmental litigation between Inyo County and Los Angeles begun in 1972 will be resolved.

If this occurs, a "stipulation and order for judgment" will be submitted to the Inyo County Superior Court. This document will be the agreement in legal form. A draft of this document is included in the draft EIR as Appendix B.

If Inyo Superior Court approves the stipulation and order for judgment, the agreement will become a judgment enforceable by the court.

Here's how the public meetings will proceed

1. Welcome and introductions
2. Facilitator will explain how meeting will proceed.
3. A representative from EIP Associates will explain the CEQA process and the purpose of the meeting.
4. EIP will discuss the proposed project and alternatives of the draft EIR.
5. EIP will discuss the impacts of the proposed project.
6. Comments will be received from the audience.

NOTES:

- ☐ A facilitator will run the meeting.
- ☐ A court reporter will record it.
- ☐ Potential speakers (the public) will be asked to fill out cards. They will be called on in order of card receipt.
- ☐ Speakers will be asked to limit their remarks to five minutes and to not repeat remarks made at other meetings.

At the public meetings on the draft EIR, EIP Associates will allot most of the time to hearing from the public, said John Davis, senior vice president of EIP Associates.

"It's our intention that probably a relatively brief amount of the time available to us will be devoted to describing what the project alternatives are and what the findings of the report are in respect to environmental impacts," Davis said. "Then the majority of the meeting would be devoted to hearing from members of the public, their views on the EIR, what we should respond to in the course of finalizing the document."

Although speakers will be allowed five minutes each, Davis said this should not discourage people from expressing their thoughts fully to EIP in writing if they cannot do so at a meeting.

"We would like to hear from everybody," he said. "There's no way that anyone would be really excluded in the sense that the opportunity is always available to write to us. So if an individual felt that there isn't enough time in the meetings to make all the points they want, then I would encourage them to write us a letter because obviously it's sometimes a little easier both for the commentator to make the point clearly in a letter and it's easier for us to understand it and respond to it properly."

Interview

John Davis of EIP talks about the EIR process

John Davis, senior vice president of EIP Associates of San Francisco, says the draft environmental impact report on groundwater management in the Owens Valley it prepared with Inyo County and Los Angeles is unique among the more than 2,000 environmental documents EIP has prepared since 1968.

EIP Associates of San Francisco was founded at about the same time CEQA and NEPA, the California and national environmental policy acts, were passed. (CEQA, the California Environmental Quality Act, requires governmental agencies to prepare an EIR documenting and considering effects of a proposed project or action. NEPA, the National Environmental Policy Act, requires an environmental impact statement, or EIS.) EIP's business is preparing environmental documents for private companies or public agencies seeking to satisfy the requirements of those laws.

Although the projects EIP has done have varied, the firm has become more involved in water projects in the last 10 years. EIP has done water projects for the city of Santa Barbara, the Monterey Peninsula Water Management District, and wastewater projects with the city of San Francisco, and the city of Santa Rosa.

Davis, who received his master's degree in sanitary engineering from U.C. Berkeley in 1971, has worked as a civil engineer for 25 years, specializing in water and wastewater projects and environmental assessment. He has been with EIP for eight years.

In the following interview, Davis describes how the Owens Valley EIR, the draft of which is available for public review, is different from others the firm has worked on. And, he explains how EIP prepared the draft EIR and how it will use the public's comments to prepare the final EIR.

Water Reporter: Was this EIR a difficult one to write? Was it different from others you have done?

John Davis: Yes, it's unconventional and the main reason it's different from most other reports we've prepared is that to some extent we are writing an EIR on actions that have already taken place. Typically, an EIR is written on a proposed project that is yet to be implemented. In this case, the difference was that we were writing an EIR on practices that had already taken place from 1970 to 1990 and then looking as well at what the effects would be in the future with those practices modified by the agreement between Inyo County and Los Angeles.

Reporter: What is the purpose of this EIR?

Davis: The purpose of this EIR is to satisfy the requirements of the California Environmental Quality Act. Determination was made by the courts in 1972 that the project involving increasing groundwater pumping to fill the second aqueduct to Los Angeles would indeed have to fulfill CEQA requirements. Two EIRs have al-

See Interview, back page

A summary of the key chapters in the report

The EIR identifies and discusses the overall environmental consequences to the Owens Valley environment of water management practices and facilities that were implemented or constructed since 1970 to supply the second Los Angeles aqueduct, and of the projects and water management practices contained in the proposed agreement.

Inyo County, as the responsible agency, would use the EIR to assist it in deciding whether to approve the proposed agreement between Inyo and Los Angeles on groundwater management in the valley.

For Los Angeles, the lead agency, the EIR was prepared as if it were being written in 1969, just before the second aqueduct began operation in 1970.

The title of the EIR is, "Water from the Owens Valley to Supply the Second Los Angeles Aqueduct -- 1970 to 1990; 1990 Onward, Pursuant to a Long-Term Groundwater Management Plan." The following is a list of key chapters in the EIR with brief content descriptions:

History of water development in the valley

This chapter discusses the history of water export to Los Angeles with the first aqueduct, the Mono Basin aqueduct extension and the second aqueduct, and of groundwater extraction from the Owens Valley.

Finally, it discusses litigation associated with groundwater pumping, Los Angeles' first and second EIRs, Inyo County's groundwater pumping ordinance, the interim five-year agreement and cooperative studies, and the proposed groundwater management plan.

Water supply for Los Angeles

This chapter describes historic and projected water use in Los Angeles and the sources of the city's water supply. It includes sections on water conservation and water reclamation in Los Angeles.

Water management in the Owens Valley

This chapter describes water management practices in the Owens Valley prior to operation of the second aqueduct in 1970 and from 1970 through 1990.

Proposed project

This chapter describes the proposed project and summarizes the elements and procedures of the project. The proposed project consists of all water management practices and facilities implemented or constructed in the Owens Valley to supply water to the second aqueduct (completed in 1970), plus the projects and water management practices contained in the proposed agreement.

Alternatives to the proposed project

This chapter discusses alternatives to the proposed project, including alternative water supply sources for Los Angeles and alternative water management strategies in the Owens Valley.

It also identifies water management practices which Los Angeles may implement if there is no long-term agreement on a groundwater management plan.

Environmental impact assessment method and summary of impacts and mitigation measures

This chapter describes the organization and method of analysis in the resource-specific chapters that follow. It also summarizes in table form environmental impacts resulting from the proposed project and corresponding mitigation measures.

The next eight chapters discuss specific environmental issues of concern including geology and soils, water resources, vegetation, wildlife, air quality, energy, land use and economic development and cultural resources.

Ancillary facilities

This chapter describes new facilities and practices that will be constructed and implemented as part of the proposed project, including 15 new wells. It identifies the potential impacts and appropriate mitigations.

What is CEQA and why is an EIR necessary?

John Davis, of EIP Associates, provides information about the California Environmental Quality Act (CEQA):

What is CEQA?

CEQA was enacted by the state legislature in 1970. It requires governmental agencies to document and consider the environmental effects of a proposed project or action before a decision is taken to proceed.

How does an agency comply with CEQA?

When a project or action that it must approve is proposed, an agency first must determine if the project is exempt from CEQA requirements. If it is not, then the agency determines whether the project could have a significant adverse effect on the environment or is a matter of substantial public controversy. If so, an environmental impact report (EIR) must be prepared.

What should an EIR contain?

The state has published guidelines indicating what should be discussed in an EIR. A series of court decisions also have defined the expected content of EIRs.

In general, an EIR should include a complete description of a proposed project or plan, a discussion of the effects of the proposed project on the natural environment, a list of measures that can be taken to lessen adverse impacts and an identification of any significant and unavoidable environmental impacts.

Socio-economic effects of the proposed project do not have to be included in an EIR unless they result in further effects on the natural environment.

(Davis answers more questions in an interview that begins on the front page.)

Draft EIR describes impacts and mitigations in the Owens Valley

The draft environmental impact report (EIR) on water management in the Owens Valley analyzes Los Angeles' water management practices since 1970 and describes the resulting environmental effects.

The draft EIR also describes how the Owens Valley's groundwater and surface water will be managed in the future under the proposed Inyo County/Los Angeles water agreement and any potential resulting effects. As required by the California Environmental Quality Act (CEQA), the draft EIR identifies mitigation measures for any effects or "impacts" which are deemed adverse and significant. In making this determination, current and future environmental conditions in the Owens Valley have been compared to conditions in the valley prior to the commencement of LA's activities to supply its second aqueduct.

The impacts identified in the draft EIR that have occurred in Owens Valley since 1970 due to Los Angeles' water gathering resulted from: 1) increased groundwater pumping, 2) changes in surface water management practices, and 3) the abandonment of Los Angeles-owned agricultural lands to supply additional water for export to Los Angeles. The draft EIR identifies up to about 3,000 acres for mitigation.

Mitigation of some of the identified impacts has already started. Between 1970 and 1984 Los Angeles implemented several environmental projects including Farmer's Ponds, Buckley Ponds, Lone Pine Pond and Diaz Lake. Since 1984,

Inyo County and Los Angeles have jointly implemented several "enhancement/mitigation" projects throughout the valley. Together, these activities have mitigated about 2,000 acres. These projects include development of pasture and alfalfa lands, energy to supply Mill Pond Recreation Area with water, a permanent water supply to Klondike Lake, restoration of the stream in Lone Pine Park, enhancement of the grounds of the Eastern California Museum, development of the Lone Pine and Independence wood lots, revegetation of the Independence Spring Field and of an area of blowing dust near Manzanar, commencement of a flow of water in more than 50 miles of the diverted portion of the Owens River, and a permanent supply of water to ponds and lakes associated with the Lower Owens River Project.

Past impacts and mitigation

Of the 227,160 acres mapped by Los Angeles during a vegetation inventory conducted between 1984 and 1987, more than 58,000 acres have vegetation that is partially or fully dependent on groundwater. Of this groundwater dependent vegetation, 11,735 acres are located in areas that could be affected by Los Angeles' groundwater pumping.

Under the proposed agreement, these areas will be intensively monitored.

The draft EIR identifies 1,015 acres as having been significantly impacted by increased groundwater pumping

since 1970. Five hundred seventy-five of these acres have been mitigated through enhancement/mitigation projects and the remaining 440 acres will be revegetated with vegetation native to the Owens Valley.

Beginning in 1963, Los Angeles reduced the acreage of its land in Owens Valley that received irrigation water from a maximum of 21,800 acres to 11,600 acres. About 1,080 acres of these lands have not successfully revegetated with native plants following abandonment of agriculture. Nine hundred sixty of these acres have been mitigated through enhancement/mitigation projects and the remaining 120 acres will be revegetated with native vegetation.

While no areas were identified in the draft EIR as being affected solely by changes in surface water management practices since 1970, 891 acres are described as receiving impacts due to a combination of groundwater pumping and changes in surface water management and agricultural practices. Five hundred forty-one of these acres have been mitigated through enhancement/mitigation projects, 50 acres will be planted with irrigated pasture, and the remaining 300 acres will be revegetated with native vegetation.

An additional 640 acres in the Laws area has been identified in the EIR as having a very low density of vegetation cover. Although this impact was not necessarily caused by Los Angeles' practices since 1970, these acres will be

Your comments count

Public participation has resulted in important improvements to the proposed agreement.

You suggested:

1. The goals and principles of the agreement apply not only to Owens Valley but to the entire county.
2. The term "groundwater mining" should be defined in the agreement.
3. Type B scrub vegetation, which depends on groundwater, should not be allowed to change to Type A, or non-groundwater dependent vegetation.
4. Groundwater pumping and surface water management practices should be governed so as to avoid decreases in vegetation cover as well as changes in vegetation type.
5. Words such as "would" and "could" should be strengthened.
6. The terms "significant" and "measurable," as used in determining whether mitigation is necessary, should be defined.
7. Los Angeles' pumping should not adversely affect water quality or water levels of private wells.
8. The process for resolving disputes between Inyo County and Los Angeles should be more clearly defined.
9. Los Angeles should pump no water for export from the Lone Pine town supply wells once a new reservoir is constructed.
10. An increase in future aqueduct capacity should not be allowed.
11. There should be a time limit for implementing mitigation.
12. Inyo and Los Angeles should make it clear that protecting the environment of the Owens Valley has priority over providing a "reliable" supply of water to Los Angeles.
13. Trees, rare and endangered plant species, and riparian vegetation should receive protection.
14. Los Angeles should manage livestock grazing and its management should be open to public review.
15. Inyo and Los Angeles should take special measures to protect the valley's vegetation during and following the drought.

And these changes occurred:

1. The agreement now covers Los Angeles' water management practices throughout Inyo County.
2. Groundwater mining is defined in the agreement. The procedures for avoiding groundwater mining are described in the Green Book, the technical appendix to the agreement.
3. Under the agreement, Type B vegetation must not be allowed to change to Type A.
4. The management goal for types B, C and D vegetation now requires avoidance of significant decreases in live vegetation cover.
5. The verbs "would" and "could" have been changed to "shall" and "will" in the agreement.
6. The agreement and the Green Book more clearly define these terms and explain how they are determined.
7. The agreement requires regulation of groundwater pumping to avoid impacts to water quality or water levels of non-LA owned wells. The Green Book describes how impacts to private wells will be avoided.
8. The agreement clearly describes the steps to resolve disagreements.
9. Once a new 500,000 gallon reservoir is in service, groundwater from the wells supplying the Lone Pine water system will no longer be exported.
10. Now LA may not build a third aqueduct or increase its ability to export water from Inyo County.
11. Mitigation must be commenced within 12 months of a determination that a significant impact has occurred. The Green Book spells out the procedures Inyo and LA must follow in developing a mitigation plan.
12. Page one of the Green Book says the goal of water management is to protect the valley's vegetation and environment.
13. The Green Book singles out this vegetation for management, monitoring and protection.
14. In Chapter 17 (page 17-5) of the draft EIR, LA has reaffirmed its commitment to a five-point grazing management program.
15. The Inyo/LA Standing Committee adopted a policy governing future groundwater pumping that calls for environmentally conservative management with the goal that soil water in the rooting zone of vegetation recover to pre-drought levels. This policy is part of the draft EIR and is open to public review and comment.

Your continued participation in the process by reviewing the agreement, the Green Book and the draft EIR, and commenting in writing or at scheduled public meetings, can make a difference.

Impacts, from page 2

considered by the Inyo County/Los Angeles Standing Committee for selective mitigation.

In addition to the mitigation measures identified for specific sites, the EIR describes other measures in the agreement that provide compensatory or valley-wide mitigation.

Perhaps the most notable of these mitigation measures is the Lower Owens River Project. This project would restore and enhance a 53-mile stretch of the lower Owens River, from the aqueduct intake to the Owens River Delta, through the expansion of the existing project commenced in 1986. Off-river ponds now in existence would be maintained and new ponds and wetland areas would be created to support a viable fishery and wildlife habitat.

The agreement

The Inyo County/Los Angeles agreement itself provides valley-wide mitigation in that its primary management goal is protection of Owens Valley's environment. The goal of the agreement is to manage groundwater and surface water to avoid significant decreases in vegetation cover or changes in vegetation type from the conditions that existed between 1984 and 1987. During this period the valley's vegetation was at its healthiest since 1970.

In the event that any significant impacts occur that are inconsistent with the goals of the agreement or with CEQA, they will be mitigated through revegetation with native plants. However, under the proposed agreement, mitigation is not a primary goal -- the primary goal is to avoid adverse impacts -- it is a secondary tool to be employed if the primary goals are not fully achieved.

Other elements of the agreement that will enhance the Owens Valley environment include:

- ☐ providing water and funding for ditches in Big Pine;
- ☐ implementing a salt cedar control program;
- ☐ returning town water systems to local control;
- ☐ rehabilitating and expanding parks and campgrounds; and
- ☐ opening South or North Haiwee reservoirs to recreational use.

The agreement provides for an extensive monitoring network between Los Angeles pumping wells and private wells to ensure that any drawdown effects are detected before they affect the private wells. If a private well is affected by Los Angeles' groundwater pumping, measures are prescribed in the Green Book (the technical appendix to the agreement) to determine whether impacts have occurred and to mitigate them.

Mitigation could include discontinuing Los Angeles' pumping to allow water level recovery, and/or setting the pump in the affected well deeper in its casing, and/or deepening or replacing the affected well, and/or compensating the owner for the additional cost for power if water level decline requires a significant increase in pump lift.

The draft EIR describes the cumulative effects of Los Angeles' water-gathering activities since 1913. LA's past activities, when considered together with its activities since 1970 and under the proposed agreement, have had significant effects on the Owens Valley environment--both adverse and beneficial.

The degree of significance of the cumulative impacts of Los Angeles' activities since the turn of the century varies depending on whether the impacts are compared to a pristine Owens Valley environment, an agricultural Owens Valley in the early 1900's, conditions in 1970, or to an Owens Valley as it might appear today, had Los Angeles never entered the valley and had the land remained in private ownership.

Under the last scenario, the draft EIR states that one can only speculate on the level of development and environmental change that would have occurred; without doubt, the valley would be different than it is today.

Commissioners hold December workshops

The Inyo County Water Commission will conduct public workshops Dec. 18 and Dec. 20, 1990, on the proposed water agreement between Inyo County and Los Angeles, its technical appendix the Green Book, and the draft environmental impact report.

The purpose of the workshops will be to answer many of the questions that people asked about the agreement, Green Book and the draft EIR at the four EIR public

meetings. The purpose is **not** to receive formal comments on the draft EIR (in other words, at the EIR meetings, comments will be received and recorded; at the water commission workshops, questions actually will be answered but not recorded as comments to the draft EIR). The commissioners as well as staff from the Inyo County Water Department will be present to respond to questions and comments.

The water commission workshops will be held thus:

Dec. 18 in Lone Pine at 7 p.m.

Dec. 20 in Bishop at 7 p.m.

The exact locations of the workshops in Lone Pine and Bishop will be announced in the local media.

Remember: These workshops are for answering your questions. If you have comments on the draft EIR, you must make them at the scheduled public meetings of Dec. 4, 5, 11, 12, and (in Los Angeles) 13, or in writing by Jan. 4, 1991.

Interview, from front page

ready been written on groundwater pumping and were rejected as inadequate by the courts. This is the latest effort to satisfy the courts and the difference in this case is it's a joint project in the sense that it addresses an agreed procedure for groundwater pumping rather than a procedure developed solely by LADWP.

Reporter: How did you prepare this draft EIR?

Davis: We began about 18 months ago working with the staff of both the Department of Water and Power and Inyo County Water Department.

We used our own technical staff to compile the large volumes of information that were available and to do some original research, particularly in the area of the effects on vegetation in the valley. From that we compiled a preliminary draft EIR which was then reviewed by the Department of Water and Power and Inyo County Water Department. They had extensive comments on the report.

We took those comments, analyzed them and wrote a second preliminary draft environmental impact report which we again returned for comments to the Department of Water and Power and Inyo County Water Department.

The second round of [what were] really workshop sessions involving all three parties -- us, Inyo County and DWP -- resulted. And together we produced a draft EIR suitable for release to the public. That's what's out for review today.

Reporter: How does the EIR work -- does it protect the Owens Valley?

Davis: I think I should make clear that an EIR isn't a decision making document in itself. It provides information that decision makers will take into account when they decide what they are going to do. So an EIR cannot lay down any rules on how things might be conducted in the future. Those are the decisions that have to be made by the decision makers.

Reporter: So an EIR in itself doesn't do anything other than lay out guidelines and satisfy CEQA?

Davis: That's really the case. We go back to: Why was the legislation passed? The reason was that the people of California, or the legislators, believed that projects were being proposed without decision makers taking into account what their environmental effects might be. They were considering only perhaps costs or technical feasibilities and they weren't looking at whether adverse environmental effects were resulting. So the purpose of the legislation was to make sure that when a decision making body such as the county board of supervisors or the commissioners of the [DWP] made a decision about a project, they had to have before them an environmental report that told those decision makers and

the public what would be the environmental effects of certain actions.

Now the EIR itself doesn't prohibit or require any particular action but the decision makers have to take into account the information in the EIR when they do make a decision.

Reporter: Can you explain the public's role in the EIR process?

Davis: The way the public play a role in the EIR process, this is something that's written into the guidelines for implementation of CEQA.

There are a number of points in the process where the public get a chance to play a role or influence the course of events. The first point is when a Notice of Preparation is sent out announcing to the public that an EIR is indeed going to be prepared, and we did this something over a year ago now. The Notice of Preparation was sent out and we received a number of letters from interested parties. We held a sequence of meetings, scoping meetings we referred to them as, the purpose [of which] was to solicit comments from the public on what should be addressed in the EIR.

So the first opportunity for the public to contribute was to give us an idea at those meetings or by a written response to the Notice of Preparation of what issues they wanted covered in the EIR. We took those into account when we figured out the scope of the work that we would do to write the EIR.

The second opportunity for the public is [that] when the draft EIR is made public, as has been done in the Owens Valley, there's a requirement for a 45-day comment period. In this case, because of the complexity of the project, it was agreed to make it a 90-day review period.

During that review period the public can review the report, either a copy they received themselves or one of the library copies in the Owens Valley, and respond to us with comments on what is in the EIR. If people feel that there are matters that we should have covered in the EIR and didn't, then it will be appropriate for them to write to us and tell us about it.

Although it's not actually required that there be another series of public meetings, we are holding the public meetings in December to give people an opportunity to tell us face to face what their comments on the EIR are. There will be a court reporter at those meetings and we'll respond not only to the letters we receive but also to the comments made at the meetings.

To finalize the EIR we are obligated to respond to all of those comments and a final EIR will be prepared including responses to comments sometime in 1991.

Reporter: How exactly will you deal with all of the comments?

Davis: The normal procedure that we use is to first compile all the written comments, look at the transcripts of the meetings and then to divide all the comments up into the various technical areas. For example, I expect we'll have a number of comments on hydrology and groundwater; I expect we'll have a number of comments on vegetation effects; and we may have comments on economic impacts.

We would assign a number to each of the comments and then sort them so that the technical specialist that deals with vegetation will receive all those comments that deal with that subject. They will then undertake whatever research or analysis they need to do to respond to those comments.

Finally, we'll compile all of the written responses from each of the technical specialists and put them together in a document which is referred to as the Response to Comments document. The Response to Comments document and the draft EIR that has already been released will constitute the final EIR.

Reporter: So the public does have a pretty good chance of influencing the final EIR?

Davis: They do. We are obligated to respond to any written comments and we will do that. So when the decision makers make their final decision they will have before them not only the technical work in the EIR but they also will have all of the letters written by members of the public and regulatory agencies and our responses to their comments, and so it is an open process and it really brings to the decision makers not only the technical opinions of the technical specialists working on the EIR but also the views of members of the public.

Reporter: Will Inyo County or LADWP be allowed to respond to any of the comments, once you have compiled them?

Davis: The approach that we would expect to take is essentially the same as the one that we did with the draft EIR, in that EIP will take and compile all of the comments. We'll prepare written responses to the comments. We'll then put them together in a draft Response to Comments document, a preliminary draft, and take that to Inyo County Water Department and the Department of Water and Power. And I expect as we get into the draft that we would have a series of workshops together to make sure that the responses are right and that we're comfortable with them.

One thing, though: The object of the exercise here is to respond to comments on the content of the EIR. Typically, when an EIR is done on a controversial project, commentators may bring up other matters that are not directly associated with the EIR. For example, we may get comments on the effects of all of the DWP's activities, such as the drying up of Owens Lake. That really isn't possible with this EIR. There's no reason why we should respond to that to satisfy CEQA requirements.

Reporter: Could the comments result in rewriting the EIR?

Davis: They could. But that's a decision we won't make until we receive all of the comments. There are really two ways to go. One is to simply prepare another volume which is all the comments we received and our responses to them. That, together with the draft as it stands today, would constitute the final EIR.

The alternative would be, if we feel that some of the comments are substantial enough that we need to go back and rewrite parts of the EIR, then that's what we will do. The final EIR then would consist of a revised version of the draft together with the Response to Comments.

WATER REPORTER is published by the Inyo County Water Department in Bishop, California.

Department Director: **Greg James**
Newsletter Editor: **Heidi Walters**

If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

"In that country which begins at the foot of the east slope of the Sierras and spreads out . . . toward the Great Basin, it is possible to live with great zest, to have red blood and delicate joys " (from Mary Austin, The Land of Little Rain)

WHY A NEWSLETTER?

Over the past decade, Los Angeles and Inyo County have entered into increasingly complex relationships which have left many perplexed. In a series of newsletters, Inyo County Water Department will be reporting pertinent information on numerous aspects of Owens Valley's water issues. Inyo County, Los Angeles, and other public agencies are setting policies which affect both the unique Eastern Sierra environment and human health. Owens Valley residents need to know the facts in order to play a more active role in influencing critical decisions which lie ahead. This first newsletter aims to provide a clearer understanding of the background and the current workings of the water management system.

INYO COUNTY WATER DEPARTMENT--HISTORY:

Completion of the second L. A. Aqueduct in 1970 led to an increase in groundwater pumping and surface diversions from the Owens Valley and Mono Basin. The capacity for export of water was increased from 485 cubic feet per second to 775 cfs. Shortly thereafter, valley residents faced significant damage to valley vegetation as well as the drying of springs and artesian wells. In 1972, the people of the Owens Valley appealed to the courts through the county government to enforce the California Environmental Quality Act and thereby protect the valley's water resources. The lawsuit, entitled County of Inyo v. Yorty, claimed irreparable environmental impacts due to increased groundwater pumping by the City of Los Angeles. An ordinance was adopted by Inyo County residents in 1980 allowing the County to manage extraction of water resources within the Owens Valley. This ordinance created the Inyo County Water Department and the Inyo County Water Commission.

In 1984, Inyo County and Los Angeles entered into a five-year agreement suspending litigation and establishing joint management of the groundwater basin. The overall goal of the agreement has been to jointly develop a long-term management plan that provides for the water needs of both Los Angeles and the Owens Valley.

The five-year agreement also initiated the Cooperative Vegetation Studies, which included the U.S. Geological Survey as an unbiased third party. Los Angeles, Inyo and USGS each contributed scientists who combined their efforts to study many aspects of groundwater and plant relationships in the Owens Valley. Research projects have examined soil-plant-water interactions, impacts of

watertable drawdown, native species revegetation, and wellfield management. These studies have furthered understanding of the Valley's environment and will play an important role in the upcoming decisions regarding long-term management of the Owens Valley groundwater basin.

IMPORTANT AGREEMENTS AND DECISIONS:

1972 Inyo County Sued Los Angeles Over Expanded Groundwater Pumping in Owens Valley

1973 Court Ordered Los Angeles to Prepare an Environmental Impact Report (EIR)

Originally the Superior Court ruled against the County suit. However, by petitioning the State Court of Appeal, Inyo won its demands that the City of L.A. prepare an EIR to comply with the recently enacted California Environmental Quality Act (CEQA).

1976 DWP Completed First EIR Proposing Increased Pumping Rates

Inyo County challenged the adequacy of the EIR and sought restraints on pumping rates until determination. Court set pumping at 149.56 cfs.

1977 Appeals Court Ruled EIR Legally Inadequate

Court Allowed Increased Pumping Rates of 315 cfs Until March 1978

Due to drought conditions, Los Angeles was granted permission to exceed court imposed pumping limits.

City Petitioned California Supreme Court to Review Court of Appeal Actions

Los Angeles challenged decisions by Court of Appeal on the inadequacy of its EIR and restraints on pumping. By unanimous vote, the Supreme Court denied L.A.'s petition.

1979 Los Angeles Completed Second EIR

1980 Inyo County Voters Passed Groundwater Ordinance.

This ordinance was intended to regulate groundwater pumping in the Valley through a Groundwater Management Plan and pumping permit procedure. It also created the County Water Dept. and the Water Commission to develop the plan and write an EIR. The ordinance was passed by 76 percent of the voters. The original intention of the ordinance, to regulate groundwater pumping, was ruled unconstitutional by a trial court in 1983.

1981 Second EIR ruled Inadequate

1982 Memorandum of Understanding Adopted by Inyo and Los Angeles

This document put forth the intent of both parties to work together in identifying and recommending methods to meet the needs of the Valley and of Los Angeles. It also stated the parties' desire to have a groundwater study of the Owens Valley by the USGS. Both the Technical Group and the Standing Committee were formed as a result of the memorandum.

Inyo and USGS Groundwater Study Agreement

Inyo County entered into a five year agreement with USGS to conduct a groundwater study in the Owens Valley at a cost of \$400,000.

1983 Groundwater Management Report Completed by County Water Department

A Groundwater Management Plan in compliance with the Groundwater Ordinance was virtually completed when the Ordinance was ruled unconstitutional.

Inyo/Los Angeles Reached Five Year Agreement

Following the Superior Court's decision invalidating the County groundwater ordinance, the Board of Supervisors decided to expand negotiations with Los Angeles to determine whether cooperation could be substituted for litigation. Public review of the draft plan took place in Sept. 1983. Both the County's and Los Angeles' governing bodies approved the agreement. Final approval of the courts occurred in 1985. The two parties agreed to:

- * Settle property tax litigation between the County and Los Angeles
- * Put "on hold" Inyo's appeal of the Court's decision invalidating its groundwater ordinance
- * Suspend litigation on Inyo County's environmental suit and court-imposed pumping restrictions by negotiating yearly pumping amounts
- * Lower town water system rates
- * Conduct five-year cooperative studies
- * Begin enhancement/mitigation measures
- * Establish a long-term management plan
- * Payment by L.A. to help cover costs of studies
- * Resume litigation and court pumping restrictions if the parties did not develop and adopt a long term joint groundwater management plan for the Owens Valley

Inyo/USGS/L.A. Agreed to Jointly Conduct Groundwater and Vegetation Studies

The County and Los Angeles jointly contracted with the USGS to conduct a groundwater study and a vegetation survivability study in the Owens Valley. These two agreements superseded the original

groundwater study agreement between the County and USGS.

Inyo/Los Angeles Cooperative Studies Agreement Reached

In order to provide additional information to the USGS and to jointly conduct additional studies, the USGS, Inyo, and Los Angeles worked together to gather data for use in computer models intended to help determine impact of groundwater withdrawals on native vegetation.

1984 Inyo and L.A. Dewatered Vegetation Study Sites

Both parties agreed to share costs to dewater four study sites in the Valley. Without these systems the USGS vegetation survivability studies could not proceed.

1985 Standing Committee Agreed on Method of Payment for Cooperative Studies

In early 1985 the USGS requested the County and Los Angeles to extend the vegetation survivability studies for two additional years at a combined cost to both Inyo and L.A. of approximately \$200,000. This proposal triggered negotiations at the Standing Committee over the amount that the County and Los Angeles should pay for the increased costs of the studies. The matter was resolved at the April 15 Standing Committee meeting when it was agreed that Los Angeles would pay all future increased costs for the USGS and cooperative studies approved in advance by Los Angeles' Technical Group.

1988 Extension of Original (1983) Agreement

Date for completion of the vegetation studies and preparation of a long-term management plan was extended to June 30, 1990.

Inyo and L.A. Change from Annual Pumping Program to Six-Month Program

A second dry year prompted Inyo and L.A. to change to a 6 month negotiated pumping program. This allowed decision making based upon more timely results of monitoring of soil moisture and plant response.

SUMMARY OF FINANCIAL ASSISTANCE

Since the 1980-81 fiscal year, Inyo County has spent a total of \$3,108,122 on the Owens Valley studies and for the operation of a Water Department. During this same period the County has received a total of \$2,111,318 in financial assistance from Los Angeles, and \$150,000 from other sources for a total of water related revenues of \$2,261,318. Therefore, since the 1980 passage of the groundwater ordinance, Inyo County has expended \$846,804 in County funds on implementing the ordinance and conducting groundwater and vegetation studies that has not been offset by water related revenues.

CURRENT STATUS AND FUTURE OF NEGOTIATIONS

In order to comply with the court requirement that an EIR be submitted to the court not later than the end of the agreement on June 30, 1990, Inyo County and Los Angeles have agreed that the deadline for reaching, or for not reaching, a preliminary agreement on a long term groundwater management plan is April 1, 1989. Opening negotiations at the staff level between the County and Los Angeles on the development of a long term groundwater management plan now are underway.

Preliminary Agreement If a preliminary agreement is achieved by April 1, 1989, the parties will begin to jointly prepare an EIR on the plan. During the period between April 1, 1989, and June 20, 1990, a draft EIR will be prepared and circulated for public review and comment, a final EIR will be written and adoption of the final EIR will be considered by the governing bodies of the County and of Los Angeles. If the EIR is approved, the respective governing bodies will consider final approval of the long term groundwater management plan. If the final EIR and plan are approved by both Inyo County and Los Angeles, the documents will be submitted to the 3rd District Court of Appeal. If the EIR is approved by the Court, the litigation between the County and Los Angeles over the environmental impacts of groundwater pumping in the Owens Valley, and over the County's right to regulate groundwater pumping through its groundwater ordinance will be terminated or permanently suspended.

No Agreement If the County and Los Angeles cannot reach agreement on a long term groundwater management plan by April 1, 1989, L.A. will begin the preparation of an EIR on its increased pumping operations that were commenced after the completion of the second aqueduct. Inyo County would not participate in the writing of this EIR. This EIR would be submitted to the 3rd District Court of Appeal by June 30, 1990, or groundwater pumping in the Owens Valley will be reduced by the Court to 89 cfs. (That amount is approximately one quarter of the current pumping capacity.) By June 30, 1990, litigation that has been "on hold" between the County and Los Angeles would resume.

UPCOMING NEWLETTER TOPICS:

Mitigation/Enhancement Projects
Tamarisk/Salt Cedar Problems
Scientific Study Findings
Agreement v. Lawsuit: Benefits and Drawbacks

GROUPS AND COMMITTEE MEMBERS INVOLVED WITH OWENS VALLEY GROUNDWATER PUMPING:

BOARD OF SUPERVISORS - Selected by county-wide elections. The Board ensures the County fulfills its responsibilities toward the 1983 agreement. It is also responsible for acquiring public input and establishing County positions and policies on groundwater pumping for our representatives to the Tech. Group and Standing Committee.

Keith Bright, Larry Calkins, Bob Campbell, H. B. Irwin, and one vacancy

WATER COMMISSIONERS - Established by County election in November, 1980. Members are appointed by the Board of Supervisors for a four-year term. They advise the Board in preparing a groundwater management plan for the Owens Valley.

Ray Gray (Chairman - 1 year rotation), Harry Holgate, Scott Kemp, Paul Lamos, and Thaddeus Taylor

TECHNICAL GROUP - Members are selected internally by the County and LADWP. The group reviews information from studies in the valley and serves as an advisory group to the Standing Committee.

Inyo County - Greg James, County Water Director; Brent Wallace, County Administrator; David Groeneveld, Consulting Plant Ecologist; Tom Griepentrog, Consulting Hydrologist; Mary Jo Radell, Assistant Hydrologist; and Bill Hutchison, Consulting Hydrologist

Los Angeles - Duane Buchholz, Bishop Office Assistant Engineer of L. A. Aqueduct, Robert Wilson, Engineering Services Supervisor, Russ Rawson, Wildlife and Rangelands Supervisor, Lloyd Anderson, Rangelands Engineer, Gene Coufal, Hydrologic Engineer, Mel Blevins, Senior Hydrologic Engineer, and a City Administrator representative

STANDING COMMITTEE - L.A.'s representatives are selected by the L.A. City Council and the Board of Water and Power Commission. The Inyo Board of Supervisors and the Water Commission appoint members to represent Inyo County. This group reviews reports and recommendations from the Technical Group and attempts to resolve differences between the parties. Members also make recommendations to the appropriate governing bodies.

Inyo County - Greg James, County Water Director and County Counsel; C. Brent Wallace, County Administrator; and Gayle Todd, Asst. to the County Administrator; two Water Commissioners: Ray Gray and Thaddeus Taylor (1 year appointments); and Bob Campbell and H.B. Irwin, members of the Board of Supervisors

Los Angeles - Duane Georgeson, Asst. General Manager; Judy Davison, Sec. of the Board of Water and Power Commission, and at least one member of the L.A. City Council; two members of the Water and Power Commission: Rick Caruso and Jack Leeney, Pres. and Vice Pres., respectively, of the Board of Water and Power Commission.

Put Me On the Inyo County Water Reporter Mailing List

If you would like to receive future issues of the newsletter, fill in your name and address below and send to:

INYO COUNTY WATER DEPARTMENT, 301 West Line Street, Suite C, Bishop, California 93514

NAME: _____

ADDRESS: _____

_____ I would like to receive this newsletter.

_____ I would like to receive Water Commission meeting minutes and notices.

PUBLIC INPUT

Negotiations between Inyo County and Los Angeles are reaching a critical point with the fast-approaching end of the agreement. By April of next year, Inyo and Los Angeles must have decided either to jointly write an EIR or resume litigation and prepare a separate EIR. Consequently, public awareness and input would be beneficial at this time. Following is a partial list of agencies and/or persons to contact concerning long-term groundwater management. Inyo County members of the Standing Committee and Technical Group can be contacted through the County Water Department. The Los Angeles members can be contacted through the Los Angeles Department of Water and Power in Bishop or Los Angeles. Summaries of Technical Group meetings and minutes of Standing Committee meetings are available to the public.

INYO COUNTY BOARD OF SUPERVISORS

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INYO COUNTY WATER COMMISSION

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L.A.D.W.P.

873 N. Main St., Suite 227
Bishop, CA 93514 (619) 872-1104

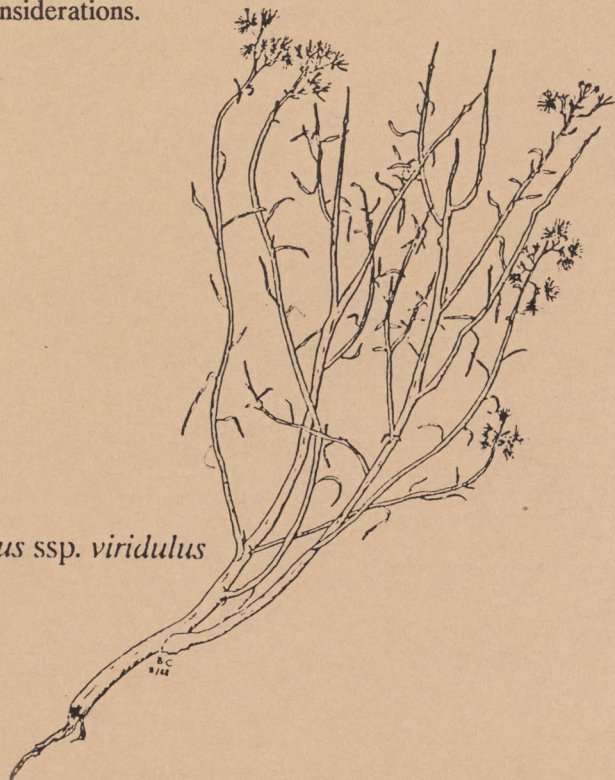
MEETINGS AND EVENTS

Standing Committee Meeting: Jan. 18, 1989 in Bishop. Open to the public. Call the County Water Dept. for further details.

Eastern Sierra Water Symposium: Feb. 6, 1989 in Bishop. This Symposium is co-sponsored by the Board of Supervisors of both Mono and Inyo Counties, the Calif. Native Plant Society (Bristlecone Chapter), Eastern Sierra Audubon Society, The Mono Lake Committee, The Owens Valley Committee, and the Toiyabe Chapter of the Sierra Club. Possible topics include: Southern California's water needs, California water law and potential legislation applicable to the Eastern Sierra, a historical perspective of water use in Owens Valley and the Mono Basin, recent history and an Eastern Sierra Water Management Plan, L.A.'s hopes for water management east of the Sierra, Vegetation and hydrological studies, Inyo-Mono mutual concerns and objectives, and water related environmental considerations.

Rubber rabbitbrush

Chrysothamnus nauseosus ssp. *viridulus*



"This valley sees but little rain, but where streams come down from the Sierra they spread out and great meadows of green grass occur. Tens of thousands of the starving cattle of the state have been driven in here this year, and there is feed for twice as many more."

Capt. J.W. Davidson, 1859

INTRODUCTION

When L.A. and Inyo County formalized a five year agreement in 1985, it was mutually agreed that a number of projects would be jointly implemented. These projects were given the title "Enhancement/Mitigation." "Enhancement" implied that the value, or attractiveness of an area would improve, and "mitigation" meant that some detrimental effects of former practices would be moderated or eliminated.

The Enhancement/Mitigation (E/M) projects undertaken have been quite varied. Some have arisen directly as a result of damage caused by surface diversions or by groundwater pumping; others serve as compensation for degraded areas. Compensation provides areas of scenic or economic value to valley residents. After three years a majority of the projects are proceeding successfully.

Most projects require water which is either pumped or diverted in normal and dry years. Wells for E/M projects are perforated below a significant confining layer that separates the shallow aquifer from the deeper pumped zones. Diverted water is "replaced" with pumped water.

We have chosen the topic of enhancement/mitigation because it is controversial and misunderstood. Questions arise regarding the amount of or reason for environmental degradation, how change can be evaluated and compensated, whether water pumped for these projects creates "sacrifice areas" in the valley, and whether existing E/M projects should continue.

This issue of the newsletter allows residents to judge the kinds of E/M activities that have occurred or are in the planning stages. Owens Valley has resources with high economic value. It may be inevitable that we must share water resources with the large population center of Los Angeles, but with cooperative effort from both Inyo and L.A. the valley has seen some correction and compensation for past environmental damage.

Background

The passage in 1980 of the County's Groundwater Ordinance directed the newly created Water Department to produce a groundwater management plan to protect the

valley's environment and quality of life. A result was The Owens Valley Water Management Report completed in 1981. Following solicitation of the public's perception of environmental "hot spots" in the valley, the report recommended implementing a series of projects to improve areas degraded by groundwater pumping and surface diversions or to compensate for their loss. It was suggested the projects could improve wildlife, recreational, and economic resources in the valley.

The legality of the Ordinance was challenged by Los Angeles and ruled unconstitutional just prior to completion of an overall management plan for the valley. Inyo County's appeal to this decision was "put on hold" by the five year agreement entered into by Inyo and L.A. in 1985. In this agreement, the concept of environmental mitigation or compensation was incorporated. The agreement called for the implementation of certain projects and provided for the addition of "reasonable" new projects.

Currently, decisions on the feasibility of additional projects is the responsibility of the Standing Committee. Evaluations of proposed projects are provided to the Standing Committee by the Technical Group. Completed and ongoing projects are reviewed annually by the Technical Group as to their effectiveness towards stated goals and environmental impacts. These reviews also suggest modifications as necessary.

If a joint management plan is not reached by the two parties, Inyo must determine which enhancement/mitigation projects are to be continued. Necessary water requirements for these projects will then be submitted to the Court of Appeal in the form of a motion to increase any interim pumping limitations by the amount necessary to allow the continuation of selected enhancement/mitigation projects.

ENHANCEMENT/MITIGATION PROJECTS: PURPOSE, STATUS, AND WATER USE

Following is a list of E/M projects that have been implemented or are in the process of implementation since the 1985 agreement. Each project lists its purpose, current status, and water requirement. Water use is presented in acre feet (a.f.) per year.

Laws/Poleta Native Pasture

- To re-establish irrigation to approx. 220 acres of native pasture on two parcels north and south of Laws.
- Since 1987, water has been supplied to most of the 220 acres resulting in improved grazing capacity.
- Water is diverted from Upper and Lower McNally Canals with replacement water in 1987-88 from wells 387, and 388 (usage 660 a.f.).

Laws Museum

- To decrease dust problem and improve scenic value with landscaping.
- Approx. six acres have been seeded and irrigated. Wind-break trees have been established.

McNally Ponds/Native Pasture

- To create a waterfowl habitat, enhance and maintain existing vegetation, and increase grazing capacity.
- In 1987, a constant water supply was provided to existing ephemeral ponds for waterfowl. The 100 acres of native vegetation and 200 acres of native pasture were irrigated during '87 and '88 growing seasons resulting in increased use by livestock.
- Water is diverted from Lower McNally. Ponds are filled with Owens River water (usage 4000 a.f.). Replacement water is from wells 375 and 387 near Big Pine.

Millpond Recreation Area

- To provide funds to operate the park's sprinkler system.
- Funds have been maintained by D.W.P. since October 1985.

Big Pine Ditch

- To restore water in existing ditches, thus providing irrigation, ornamental water, and some regreening of the town vegetation for the residents.
- Proposals from local organizations have been presented for negotiation on water source and ditch restoration.

Klondike Lake

- To create and maintain a waterfowl habitat and recreational facility by providing a stable water supply and improving access.
- Water is currently supplied year-round. Recreational use appears to have increased and waterfowl use is expected to improve.
- Water is diverted from Big Pine canal and well 389 (usage 2200 a.f.). Current water supply does not appear to be adequate.

Lower Owens River Project

- To restore a continuous supply of water to the lower Owens River, dry since completion of the aqueduct in 1913. This would enhance habitat for waterfowl, warm water fish, and other wildlife.
- Water was released along 25 miles of river channel from the Blackrock area in 1986. Five small lakes and ponds are sustained as a result of these efforts. Studies are continuing on supplying the river with higher flows. (See article on the Lower Owens River Project.)
- Water is released at Blackrock Fish Hatchery from L.A.A. diversions (est. 18,000 a.f.). Well replacement from wells 376-382 and well 386.

Street Tree Planting Project

- To regreen towns and replace trees lost due to high water cost.

- Approx. 158 trees were planted in the towns of Lone Pine, Independence, and Laws in autumn of 1988.

Eastern California Museum

- To improve the appearance of the museum grounds.
- Tree planting, pond excavation, and irrigation systems are currently proceeding with volunteer help.

Independence Ditch

- To restore flow of water through town in historic ditch.
- Flow of at least 1 c.f.s. has been maintained since April 1987.
- Water is diverted from Independence Creek and replacement water is from well 384 (usage 725 a.f.).

Independence Woodlot

- To create a woodlot near Independence to mitigate blowing dust, supply fuel wood, and provide a green belt.
- Since July 1987 water has been supplied to hybrid poplar and black locust with barley cover on a 20 acre lot.
- Water comes from well 383 (developed for this and other Independence projects)(usage 100 a.f.). Additional water may be necessary.

Independence Regreening - East Side

- To enhance the aesthetics of abandoned land adjacent to the residential area east of Independence.
- Since April 1988, 440 acres of pasture have been irrigated resulting in gradual regreening. Planting and irrigation has occurred on an additional 170 acres since autumn of 1988.
- Water is supplied from a new well (383) with a buried pipeline. This well may also be able to augment the demands of the woodlot, pastureland, and Springfield area. Additional water and labor may be necessary (usage 1825 a.f.).

Independence Pastureland

- To revegetate abandoned croplands and provide water to 350 acres of native vegetation and pasture east of Independence.
- This project began in April 1988. Irrigation and planting has resulted in a healthy growth of vegetation. Additional well capacity may be required to insure an adequate supply for this project.
- Flood irrigation is from creek flow and well 383, sprinklers are supplied from well 384, and supplements come from wells 61 and 65 (usage 1825 a.f.). Additional water supplies of 2,350 a.f. may be necessary.

Independence Roadside Rest Stop

- To improve the appearance of a small parcel of land south of town and re-establish trees.
- Site is being landscaped with lawn, trees, and a picnic area for travelers.

Manzanar Tree Pruning

- To improve the appearance of the historic site by removing dead plant debris.

- In October 1985, D.W.P. crews cleared debris from along the highway at Manzanar.

Shepard Creek Alfalfa Lands

- To decrease the dust problem along the highway by establishing 183 acres for alfalfa production.
- Approx. 200 acres are currently under production.
- Originally irrigated from diversions of Shepard Creek but will rely on existing D.W.P. well at the site (usage est. at 825 a.f.). Replacement well drilled in Big Pine.

Lone Pine Riparian Park

- To supply water through a ditch in community park for scenic beauty.
- A flow has been maintained through the park since April 1987.
- Water is from Lone Park Creek via L.A.A. Replacement water from well 385 at Laws.

Van Norman and Richards Field

- To re-establish two 160 acre parcels of abandoned pasturelands as irrigated native pasture thereby enhancing grazing value and improving its scenic value.
- Intermittent irrigation has resulted in a gradual regreening. Dead brush and limbs have been removed.
- Van Norman: flood irrigation water is from Well 390. Additional water of 480 a.f. may necessary (usage 320 a.f.). Richards: water is from Lone Pine Creek via L.A.A. through Riparian Park ditch (usage 320 a.f.)

Lone Pine Woodlot

- Similar to Independence woodlot project.
- Since May 1987 water has irrigated hybrid poplar and black locust with a barley groundcover on 12 acres.
- Water is from Lone Pine Creek and diversion from L.A.A. (usage 60 a.f.). Water will be increased to 120 a.f. to encourage faster growth.

Salt Cedar Control Study

- To determine the extent of salt cedar in the valley, estimate its water use, test the success of various control methods, and determine severity of problem. Salt cedar, also known as tamarisk, is an aggressive weedy shrub with an extremely high water consumption rate that colonizes shallow groundwater and riparian habitats. (This issue will be covered in a future newsletter.)
- Salt cedar mapping in the valley has been completed. Various methods of eradication are continuing to be tested.

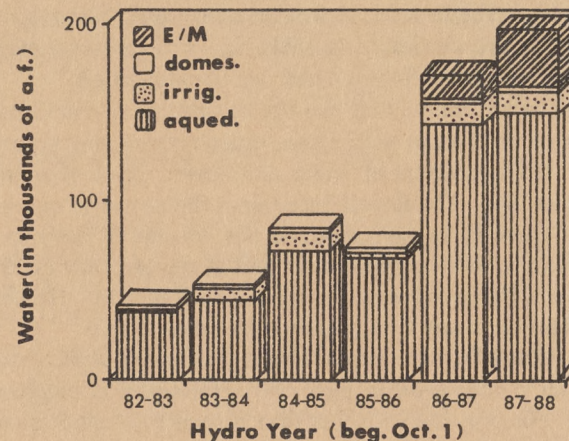
Upper Zone Well Sealing Study

- A deep well study to determine if sealing well perforations in the upper aquifer zones would reduce pumping-related environmental effects.
- In May 1986 a study began to evaluate the response of shallow aquifers to deep wells sealed in the upper zones.

Revegetation Plot Study

- To determine which species of native plants would be best suited for future revegetation projects.
- In the winter of 1986 three planting sites were cleared, fenced, and planted with native plant species. These sites had a low survival rate after one year.

Allocation of Pumped Water



Graph depicting groundwater pumped for various destinations. To maintain a fairly constant level, the L.A. Aqueduct receives both surface runoff and pumped groundwater. In low runoff years (such as '87 and '88), groundwater is pumped at higher rates to meet the aqueduct's carrying capacity. E/M, domestic, and irrigation refer to water used within the Owens Valley.

Five Bridges Road Impact Area

A one-half square mile area located north of Five Bridges Road near Bishop and just south of the Owens River, suffered riparian vegetation die-off during late summer, 1988. This impact was apparently created by a combination of drought, low flows in the Owens River, and groundwater pumping.

Groundwater pumping is from two high-capacity wells that replace water released from the aqueduct system to supply the Lower Owens River E/M project. The two wells were jointly approved by the Los Angeles D.W.P. and Inyo County following an initial hydrologic evaluation which predicted that the Owens River would retard the drawdown of the water table in the affected area. The impacted area shows this prediction to be incorrect.

The wells in question are unlike other new wells in the valley in that they were deliberately perforated in the shallow aquifer to allow for dewatering of a sand and gravel pit. Groundwater was being pumped from this pit prior to the construction of the two new wells. All other E/M wells are confined to deeper aquifers.

(cont. on page 5)

An Open Letter to the People of the Eastern Sierra

A letter substantially similar to this was submitted to the six local media agencies January 3, 1989.

Water issues in the Owens Valley stir emotions and generate public controversy. Given the history of this valley, close public scrutiny of those who represent the public in water matters is a healthy practice. Thus, as County Counsel and Director of the County Water Department, being a subject of public questioning comes with the job. However, recent unfounded broadcasts impugning on the personal integrity and professional ethics of me and my co-workers demand a public rebuttal.

These broadcasts falsely state that I, and certain consultants to the County involved in water issues, "are paid" or "are virtually paid" by Los Angeles and, therefore, it is implied that we can't be trusted to represent the interests of Inyo County and its citizens. The broadcasts further untruthfully allege that without an LA/Inyo water agreement, we would lose our jobs; and, hence, we are motivated to seek such an agreement even if it would not be in the best interests of the Owens Valley. These allegations are unfounded and just plain hogwash.

Neither I, nor County plant ecology consultant, David Groeneveld, nor County hydrology consultant, Bill Hutchison, have received, now receive, or will in the future receive, any money, payment or compensation of any kind from the City of Los Angeles or its Department of Water and Power. Each of us was hired by the Inyo County Board of Supervisors and is paid by the County of Inyo. The Board determines the nature of our work and the amount of our pay.

Whether there is an agreement or not, no one is likely to lose his job. On the contrary, if litigation with Los Angeles actively resumes, as County Counsel and as the attorney for the County, my work load will increase. Additionally, if there is no agreement, the services of Dr. Groeneveld and Mr. Hutchison will be essential to the County to provide a technical and expert evaluation of any EIR prepared by Los Angeles.

The broadcasts failed to report that if the County were to elect not to retain Mr. Hutchison's services, he would not lose his job or suffer a reduction in pay. Mr. Hutchison is employed by an independent consulting firm located in Woodland, California. His position with that firm is secure, whether or not the consulting firm continues to contract with Inyo County. Moreover, were the County to elect to terminate its contract with Dr. Groeneveld, he has ample talent and opportunity to quickly replace and exceed any lost income.

Had there been an adequate and responsible investigation prior to these broadcasts, the facts in the public record could have been easily ascertained. These facts show that in 1984, the County of Inyo and the City of Los Angeles entered into a five year agreement that placed ongoing litigation "on hold" while the County and the City cooperatively managed groundwater pumping and conducted environmental studies together with the U.S.G.S.. The record shows that from the beginning of this agreement, the Board of Supervisors sought to have the costs of these studies and of the County's water related activities paid by the City of Los Angeles. The Board's logic was simple: Why should Inyo County and its taxpayers pay for protecting and restoring the Owens Valley environment harmed by Los Angeles' water gathering and groundwater pumping activities?

The record also shows that Inyo has been partially successful in obtaining reimbursement for these costs from Los Angeles. Since the passage of the County's groundwater ordinance in 1980, the County has expended over \$3.1 million on water studies and on water related activities. Since the 1984 agreement, the County has recouped approximately \$2.1 million from L.A.

All of the funds received from the City of L.A. were deposited into Inyo County's treasury. The Board of Supervisors made the decisions as to how those funds were used. Some of these funds were used to pay the costs of the U. S. Geological Survey studies and other cooperative studies. Some of these funds were used to pay part of the costs of the County Water Department. However, the fact that a portion of these funds went to the Water Department didn't compromise the loyalties of Water Department personnel anymore than the payment of these funds to the U.S.G.S. tainted that agency's impartiality.

Everyone at the County working on water issues is committed to protecting the unique environment, economy and quality of life in Inyo County. I'm sure that most Inyo County citizens share this goal. The means of attaining that protection are varied and are certainly open to debate. The County has made no commitment to a particular course of action, whether by an agreement, litigation or legislation. However, because the current five year agreement with L.A. is coming to an end, a decision must be made in the next few months. The public should and will be informed and involved.

Without question, newspeople have every right to broadcast stories from their point of view. However, I call for an end to the unfounded personal attacks on those of us who are working hard for the County on an extremely difficult and complicated task -- the long term protection of the Owens Valley environment. Because the individuals are not the issue, all concerned would be better served by a focus on what is really important: the environmental and other policy issues and the soundness of decisions on those issues.

Through Water Commission meetings, informal question and answer sessions, newsletters and news releases and reports, the County is seeking to provide as much information as possible to the public on water issues and the ongoing negotiations between the County and Los Angeles. The outcome of these negotiations and the public's views will determine what course for protecting the valley the Board of Supervisors ultimately decides upon.

Sincerely,
GREG JAMES

Inyo County Counsel and Director, Inyo County Water Department

(Five Bridges cont.)

A population of a rare and endangered species endemic to the Owens Valley, the Coville mallow, is located on the periphery of the impact area and does not appear to be affected. To ensure its protection, surface water has been applied to the affected area. This population will be evaluated during the spring of 1989.

In the period since the impact was noticed a series of studies has focused on:

- (1) how groundwater pumping contributed to lowering the water table,
- (2) how drought-induced lower flows in the Owens River may have affected the water table by reducing natural irrigation through old stream meanders and ditches,
- (3) how various plant species which grow in very moist habitats respond to temporary water table decline, and
- (4) the possibility of managing the impacted area with water spreading activities while maintaining some pumping.

Using vegetation mapping from aerial photos to compare the impacted and surrounding unimpacted zones, it is apparent groundwater pumping from the wells with shallow aquifer perforations contributed substantially to lowering the groundwater beneath the impacted site.

Drought induced low flows in the Owens River at least partially affect the area. Recently, high flows (700 cfs) were released from Pleasant Valley Dam. These increased flows allowed water to subsequently fill irrigation ditches, beaver ponds, and abandoned stream meanders through the impacted area. Such high flows were absent during the past season.

The vegetation (willows, cottonwoods, and marsh vegetation) occupying the floodplain at the Five Bridges Road location is particularly susceptible to the effects of water table decline. Although a significant cover of willow and some cottonwoods have died, the majority of the vegetation cover will regenerate through continued management of surface water and pumping. It may be possible to use irrigation to keep the water table near the surface while maintaining at least some pumping from the two wells, perhaps seasonally, to help supply the Lower Owens River Project. This type of management is now being carefully evaluated by a joint Inyo-LA effort.

The valuable lesson learned from the Five Bridges Road impact area is that any new wells in the Owens Valley, whether for an enhancement-mitigation project or for other purposes, must be subjected to rigorous testing to ensure that the surface environment is not damaged.

Eleven miles further on, you reach the Snow [Shepard] Creeks, seven miles from them Pine [Independence] Creek, and 1 mile beyond this last, Pea-vine [Oak] Creek, running through a grove of magnificent oaks; and far away to the river, which now washes the base of the eastern range, the eye wanders over a sea of green.

Capt. J.W. Davidson, 1859

GLOSSARY

Acre foot (a.f.) - Amount of water to cover one acre one foot deep; or 325,851 gallons.

Cubic foot per second (c.f.s.) - Measurement of flow. 1 c.f.s. over 24 hours is equal to 1.98 acre feet.

Riparian - Streamside, lakeside, or wetland vegetation.

Tules - Emergent aquatic plants also known as bulrush, *Scirpus sp.*

Lower Owens River Project

The purpose of this project is to create recreational opportunities and environmental restoration on 50 miles of the dewatered Owens River channel. This project has great potential because:

- A successful warm water fishery (bass, sunfish, and catfish) would greatly enhance the economy of Southern Owens Valley. This would broaden the recreational opportunity in a region which provides mainly trout fishing.
- Riparian systems are a dwindling resource throughout western United States and northern Mexico. This project would add 50 miles of stream channel and riparian habitat.
- The rewatered channel would increase wildlife habitat and plant and animal species diversity.
- The project contains plans for developing and managing certain ponded areas to encourage waterfowl breeding.

As an enhancement/mitigation project, water was first released to the lower Owens River in June 1986. Current annual water discharge varies between 20-40 c.f.s. (approx. 18,000 a.f. per year). Unfortunately, at present flows, the Lower Owens River Project has not met the goal for establishing a fishery. In most locations of the channel, fish are sparse or absent and there are extensive stands of tules.

Since September 1988, the Inyo County Water Department, California Department of Fish and Game, and the Los Angeles Department of Water and Power have joined efforts to research why fish have not become established in the lower Owens River. Current studies are being undertaken to determine:

- how to control tule growth which may limit habitat for warm water fishes,
- the chemical characteristics of the water such as oxygen availability and pH, and
- an optimum flow for re-establishing a healthy ecosystem

An extensive data base has been established to support a computer model. The model should be completed by mid-February and will be used for planning the amount and timing of releases to achieve a viable fishery.

(cont. on next page)

(Lower Owens River cont.)

It has been proposed that water released at various points along the project be returned to the Los Angeles Aqueduct near Lone Pine. To lift the water back to the aqueduct, a pump-back station would be built near the Keeler Bridge. A series of settling ponds would be required upstream from the pumping station in order to separate out the clay, silt and organic matter that will be carried down the channel when higher flows are established. The proposed pump-back system would allow for increased flows in the river and possibly reduce the amount of groundwater pumped to supply the project by allowing recovery of some of the released water.

Water would be supplied to waterfowl breeding ponds below the pump-back station on the Owens River delta. Water would be released seasonally to maintain and enlarge the existing areas of suitable breeding habitat. Flows would be optimized to produce the largest practical waterfowl habitat while minimizing water losses to Owens Dry Lake.

In addition to enabling higher water flows to the lower Owens, the pump-back station could provide increased flexibility in managing groundwater pumping for export. Much of the vegetation east of the Owens River does not require groundwater for survival. If suitable aquifers are found beneath this area, pumping there could reduce the pumping from more sensitive areas.

Because of the complexity of developing and managing the Lower Owens River Project, full implementation would require at least three to five years following initial construction of a pump-back station. Funding could be obtained from a variety of sources including the City of Los Angeles (as a part of a long-term settlement with Inyo County) and from the State of California through its various agencies and environmental programs. Although the projected cost for the Lower Owens River Project is at least several million dollars, the value of the re-establishment of a critically important riparian habitat and increased recreational opportunities would make the expenditure of these funds a worthwhile investment.

Inyo County Water Dept.
301 West Line Street, Suite C.
Bishop, California 93514

MEETINGS AND EVENTS

Anheuser-Busch Meeting: Tuesday, Feb. 14, 1989, 7 p.m. at the Olancha School. This public meeting will explain the company's plan to transfer water from the Cabin Bar Ranch in Olancha via the L.A.A. to their brewery in Van Nuys during periods of water rationing. Anheuser-Busch is one of the largest water users in Los Angeles County. Their daily water use is approximately 5 million gallons.

Standing Committee Meeting: The Jan. 18th meeting was canceled. No new meeting time has been announced.

PUT ME ON THE WATER REPORTER MAILING LIST

If you would like to receive future issues of the newsletter, send your name and address to: Inyo County Water Dept., 301 West Line St., Suite C, Bishop, CA, 93514.

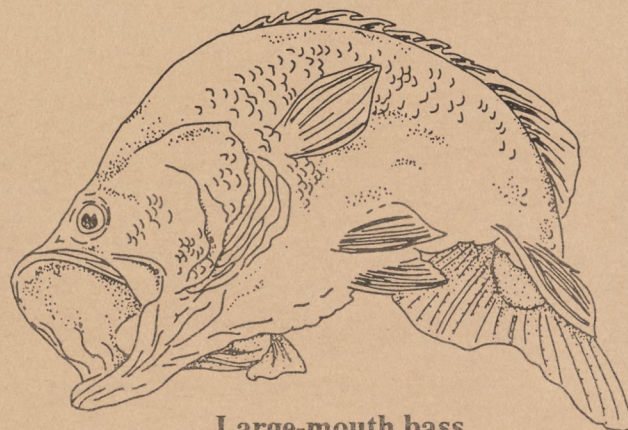
"I then marched as far as the Canon of Owen's River [the Owens River Gorge] through some of the finest country I have ever seen. It may be said literally to be a vast meadow, watered every few miles with clear, cold mountain streams, and the grass (although in August) as green as in the first of spring."

Capt. J.W. Davidson, 1859

Quotes excerpted from:

Up and Down California in 1860-1864. The Journal of William H. Brewer. Francis P. Farquhar (ed.). University of California Press, Los Angeles. 1966.

The Expedition of Capt. J.W. Davidson from Fort Tejon to the Owens Valley in 1859. Philip J. Wilke and Harry W. Lawton (eds.). Ballena Press. New Mexico. 1976.



Large-mouth bass
Micropterus salmoides

Introduction

INYO COUNTY FREE LIBRARY

After a year-long hiatus from publication, the Water Reporter is back. We hope to publish monthly to keep you informed about water-related issues in the Eastern Sierra.

In our first issue, December 1988, we discussed the Inyo County Water Department's history, including important agreements and decisions regarding Los Angeles Department of Water and Power's water management in the Owens Valley. In the second issue, January 1989, we discussed enhancement/mitigation projects in the Owens Valley.

In this issue, we review key projects and the most notable events in Eastern Sierra water policy of 1989 and early 1990.

Inyo County and L.A. draft long-term water management agreement

For seven years, Inyo County and Los Angeles officials together with numerous scientists and technicians have worked cooperatively in an attempt to develop a long-term water management plan for the Owens Valley. Last year, the Inyo-Los Angeles negotiating team reached preliminary agreement on a long-term water management plan. The tentative agreement is unprecedented in that it makes the amount of groundwater the Los Angeles Department of Water and Power can pump or surface water it can divert for export from the county contingent upon the health of the valley's vegetation.

The Inyo County Board of Supervisors, the LADWP Board of Commissioners, and the Los Angeles City Council have approved the tentative agreement. However, there can be no final agreement on water management without the approval of related documents:

An environmental impact report must be prepared, as mandated by the California Environmental Quality Act and orders of the Third District Court of Appeals in Sacramento. The EIR will describe the impacts of the proposed agreement and the impacts of Los Angeles' water gathering activities in Inyo County since completion of the second aqueduct in 1970. A draft EIR is in preparation. The public will have an opportunity to review and comment on the draft once it is completed. The dates of public meetings to discuss the draft EIR will be announced as soon as they are scheduled.

After the public has reviewed and commented on the draft EIR, a final EIR incorporating all comments received will be prepared. Once the final EIR is complete, county and city governing bodies will consider its approval. If approved, it will be filed with the appeals court by June 30, 1990.

Before completion of the draft EIR, the draft management agreement will be incorporated into two legal documents: a stipulated judgment and a request to discharge writ as satisfied. If the final EIR and the legal documents are approved by the Inyo County Board of Supervisors, the LADWP Board of Commissioners and the Los Angeles City

"...the people in Inyo and Mono counties are feeling more comfortable about having a conversation rather than a confrontation with the people at the other end of the aqueduct."

Antonio Cosby-Rossmann, 1989

Council, all the documents must be filed with two courts. Approval by the Third District Court of Appeals in Sacramento of the request to discharge writ as satisfied would resolve an 18-year-old environmental legal case between the county and city. Likewise, approval by the Inyo County Superior Court of the stipulated judgment would end the case in which Los Angeles challenged the groundwater management ordinance adopted by Inyo County voters in 1980. The long-term groundwater management agreement will not be implemented unless all required approvals are obtained.

Brief descriptions of the agreement, its technical supplement the Green Book, and the EIR follow:

Agreement

The legal documents incorporating the tentative agreement of the parties will outline the terms under which Inyo County and the LADWP will cooperatively manage the water resources in Inyo County.

Vegetation classifications--and the provision that groundwater and surface water will be managed to avoid adverse changes to vegetation--are key goals of this agreement. Other goals include: the avoidance of groundwater mining, intensive monitoring of the vegetation and water levels, the automatic turn-off of wells to protect vegetation, required mitigation of adverse impacts, the release of certain city-owned lands, the transfer of city-controlled town water systems to local control, more than \$2 million in annual financial aid to the county for implementing the agreement and other purposes, and a requirement that no new aqueduct will be constructed and that there be no increase in current aqueduct capacity.

EIR

EIP Associates, of San Francisco, is preparing the EIR with assistance from the county and the LADWP. The project description (the subject of the EIR) is: changes in water management in the Owens Valley since operation of the second barrel of the aqueduct began in 1970, as modified by the long-term agreement plus any additional changes or practices under the long-term agreement.

The draft table of contents includes: a summary of environmental impacts and mitigation measures; a history of water development in the Owens Valley; water supply in Los Angeles; water management in Owens Valley; the proposed project; hydrology and water quality; CEQA considerations, and alternatives to the proposed project.

Pact, from page 1

Green Book

Because the success of the agreement is dependent on monitoring Owens Valley vegetation, a way to guide (and keep consistent) monitoring practices and to explain the necessary scientific procedures is essential. That is the function of the Green Book, a scientific document divided into two parts, vegetation and hydrology, which contains descriptions of monitoring sites, activities and interpretations.

The Green Book is a technical work based upon scientific research and is subject to change as future study produces more information on environmental management. The Green Book will be released for public review before or at the same time as the draft EIR is released.

Eastern Sierra

There were three key water-related events in 1989: Inyo County and Los Angeles reached tentative agreement on managing water, Mono Lake gained inflow through Rush and Lee Vining creeks, diverted for years by the Los Angeles Department of Water and Power, and Mono County gained a groundwater management district, signed into law by Gov. Deukmejian in late September.

There was progress in other areas of water-related concern, such as dust mitigation on Owens Lake, and public awareness of water issues got a boost with the first Eastern Sierra Water Symposium.

Despite these events, the prevailing condition of serious drought continues to plague the Eastern Sierra and large areas of the state. And other demands on Inyo County's water resources surfaced, such as the Anheuser-Busch proposal to export groundwater from its Cabin Bar Ranch property near Cartago to its brewery in Los Angeles during periods of mandatory rationing.

"...for the successors of William Mulholland, the real stuff of nightmares must consist in the thought that a significant part of the work of three quarters of a century might be undone for the sake of some tiny shrimp and a flock of birds."

William L. Kahrl, 1982

Mono Lake

On Jan. 27, 1989, the Third District Court of Appeals invalidated the water licenses to divert water from creeks flowing into the lake held by the LADWP since 1974. The court held that the licenses did not comply with provisions of the Fish and Game code. These laws require the avoidance of impacts to fisheries below dams. The California Supreme Court upheld this decision in April.

The LADWP must obtain new water licenses from the State Water Resources Control Board. However, the water board has declined to modify the licenses until it completes multi-year studies on Mono Basin fisheries and Mono Lake levels. The National Audubon Society, the Mono Lake Com-

mittee and CalTrout have gone back to the appeals court to require more immediate enforcement of its decision to bring the licenses into compliance with state law. The board is preparing an environmental impact report on the establishment of instream flow standards in the Mono Lake tributaries from which the LADWP has been diverting, and establishment of water elevation and salinity standards in Mono Lake to provide necessary protection of these public trust resources. The EIR process has just begun and is expected to last until 1993.

In another case, El Dorado County Superior Court Judge Terrence Finney in August granted a preliminary injunction affecting Mono Lake. The Mono Lake Committee and Audubon filed for the preliminary injunction in April, requesting that LADWP be required to raise Mono Lake to and maintain it at a minimum elevation of 6,377 feet through March 31, 1990. This level would keep salinity in check and cover a land bridge and thus protect gulls nesting on Negit Island from mainland predators. The injunction resulted in an increase of Rush Creek's flow into the lake from 19 cfs (cubic feet per second) to 100 cfs. In late December, greater flows down Lee Vining Creek began.

These flows will last at least through May, when Judge Finney will consider whether to continue or modify the preliminary injunction.

In September, the governor signed into law assembly bills 444 and 1442. AB 444 creates an Environmental Water Fund which can be used to finance alternative water and power projects to compensate for loss of Mono Lake water by Los Angeles. AB 1442 provides the funding for AB 444 through settlement of a debt owed to the state by the State Water Project.

Mono County

Residents of Chalfant, Hammil and Benton valleys, fearing plans to export groundwater, succeeded in creating the Tri-Valley Groundwater Management District with the help of Mono County Counsel Jim Reed and other county officials, Assemblyman Norm Waters and Senator John Garamendi. Reed drafted the bill forming the district, Waters and Garamendi authored it and introduced it into the legislature.

The bill, signed by the governor last fall, became effective Jan. 1. Tri-Valley board members were elected Jan. 23. The new membership includes Mono County Supervisor Dan Paranick; Carol Ann Mitchell, Linda Benson and Mary Morris, three residents of the area who are voters and property owners; and William Beaver, Richard Moss and Wayne Hutton, three residents who are voters and own property with a pumping capacity of at least 100 gallons per minute.

Reed said the purpose of the district is "not to prevent export of groundwater but to regulate groundwater use in order to protect existing users and the environment."

Anyone proposing the export of groundwater must obtain a Tri-Valley permit, which will be issued only if there is proof the export will not overdraft the groundwater basin and will

Eastern Sierra, page 3

Eastern Sierra, from page 2

not harm existing water rights. The permit can be revoked or altered if there is sign of potential overdraft.

Reed said the permit process also is subject to the California Environmental Quality Act.

Owens Lake

The Great Basin Unified Air Pollution Control District gained \$900,000 last summer with which to fund Phase III of its dust mitigation project on Owens Lake. The State Lands Commission, which owns parts of the lake, provided \$675,000 and the LADWP, \$225,000.

Phase III involves drilling six wells to study the hydrology of the basin and to supply water for a dust control sprinkler test on about one square mile of the dry lake bed. Of the \$900,000, \$600,000 funds the well drilling and \$300,000 funds the design and implementation of the sprinklers. So far, four wells have been drilled and work has begun on the fifth.

Great Basin's air pollution control officer Ellen Hardebeck said the sprinklers will be operated when there are predictions of winds of such velocity that dust will result.

Eastern Sierra Water Symposium

Last Feb. 4, more than 300 people attended the first-ever Eastern Sierra Water Symposium. The all-day symposium brought together water authorities from Inyo and Mono counties, the LADWP, the Metropolitan Water District, attorney Antonio Cosby-Rossmann, and others from state, county and federal agencies.

The discussions provided a view of how water management decisions cross county, state and regional boundaries.

Cabin Bar Ranch

Anheuser-Busch's plans to export water from its property near Cartago moved forward as test wells were constructed and operated and an environmental impact report was begun, with the LADWP acting as the lead agency.

The company, which wants to pump water from the ranch for use at its Van Nuys brewery in times of water cut backs, plans to make use of the provisions of the 1986 Katz Bill. That bill requires public utilities, in this case the LADWP, to make unused capacities in its aqueduct available for water wheeling (transfer). Wheeling cannot take place if it injures any legal user of water, unreasonably affects fish, wildlife or other instream beneficial uses, or unreasonably affects the overall economy of the area from which the water is transferred.

After residents of the Olancho/Cartago area raised concerns about the project at a public meeting last Feb. 14 in Olancho, Anheuser-Busch said it would monitor 10 wells near the ranch during the test-pumping. This included the Cartago Water System and nine private wells. The results of these tests and other research will be in the EIR, which Anheuser-Busch Vice President Thomas Aldrich said should be completed early this year.

Drought

Last year was what state water officials called a critically dry year--the third such year in a row in California. More commonly referred to as a drought, conditions in the past three years have led to water shortages and cut backs in parts of the state. In the Eastern Sierra, actual April through September runoff was 63 percent of normal: 69 percent of normal in the Mono Basin and 61 percent of normal in the Owens Valley. The April 1989 through March 1990 runoff is forecasted to be 65 percent of normal: 70 percent of normal in the Mono Basin and 64 percent of normal in the Owens Valley. This forecast assumes normal weather conditions for the rest of the runoff year, which hasn't been the case.

Because of the low runoff, LADWP's pumping from the Owens Valley was reduced and additional water was purchased from the Metropolitan Water District to meet the needs of its Los Angeles customers. A glance at runoff conditions in the Owens Valley since 1984 puts the drought into perspective:

runoff year	percent of normal
1984-85	.119
1985-86	.101
1986-87	155
1987-88	66
1988-89	61

California

Imperial , MWD agree to water conservation

Under an agreement finalized last December, Metropolitan Water District (MWD) will pay for water conservation projects in return for conserved water from the Imperial Valley Irrigation District (IID), which has entitlements to use the Colorado River. MWD will spend about \$92 million for actual projects, plus \$23 million for indirect costs, \$14 million a year for five years for operating costs, and \$3.1 million a year for 35 years after that.

The IID/MWD agreement allows MWD to transfer no more than 116,000 acre feet and requires that it provide the Coachella Valley Water District with 50,000 acre feet in dry years. Coachella filed a lawsuit when the original agreement came out in 1988, saying it might affect its water rights and diversions. The Palo Verde Irrigation District, which has entitlements to use the Colorado River, was also concerned.

The final agreement settles the Coachella lawsuit and relieves the fears of IID landowners, who thought the original agreement was too loose and might allow more than 100,000 acre feet to be transferred and might not provide enough funding for conservation. It also alleviates the uncertainty of water deliveries in drought years.

1989 projects

Greenhouse

In the fall, the ICWD acquired use of a greenhouse in Chalfant Valley. It is being stocked with specimens of the various species of common shrubs and grasses found on the Owens Valley floor. Already it contains 700 four-wing saltbush plants, extras from revegetation projects at the Nevada Test Site.

The greenhouse will serve two useful purposes. First, it will allow scientists to continually study, in a controlled environment, plant responses to water stress. Second, it will enable the ICWD to grow plants for revegetation projects in areas altered by LADWP groundwater pumping.

Monitoring

Over the years, scientists and technicians working on the Inyo-Los Angeles Cooperative Vegetation Studies in the Owens Valley have developed two main monitoring procedures: measuring plant leaf area using vegetation transects and measuring soil water potential using soil psychrometers.

These procedures take place at 31 monitoring sites in the valley, 15 of which were added to the monitoring regime last year. All of these sites, recorded by aerial photography, contain a set of soil psychrometers and markers for a permanent vegetation transect. Most of the sites also have an aluminum access tube for neutron soil water gauges.

The sites incorporate a number of plant communities and vegetation types and most of them are inside the 10-foot drawdown line--the boundary drawn on the vegetation maps produced from the studies where the water table could drop 10 feet or more in a worst-case scenario. (These maps can be viewed at the new Inyo County Water Department offices on May Street.) These sites are tied to production wells, which allows for careful monitoring of the effects of groundwater pumping. If impacts are noticed or predicted, a well can be shut off.

Six monitoring sites outside of the 10-foot drawdown areas act as controls. It is hoped that these can be used to gauge the changes caused strictly by drought conditions and not by groundwater pumping.

Monitoring activities in 1989 consisted of monthly psychrometer readings and three periods of transect measurements. Here is how these procedures work:

At each site, psychrometers are placed in groups of three at four depth intervals: 0.5, 1.5, 2.5 and 3.5 meters. A psychrometer is an instrument with two wires running through it. When an electric current is sent through the psychrometer, moisture from the surrounding soil condenses on the tip where the two wires meet. From this, the amount of water in the soil available for plant use can be derived.

Vegetation transect measurements are conducted during a two-week period surrounding April 21, June 21 and August 21. Spring and fall transects are 30-meter sections of the 100-meter summer transect. A transect reading is performed by running a 100-meter tape along fence posts marking the transect. A point frame--a device made up of a vertical row of

long metal pins set at 30 centimeter intervals--is then moved along the tape allowing the long pins to be lowered through the canopy of whatever plants lie on the transect. An observer counts and records the number of times a pin contacts a live leaf and the species of plant contacted.

Rain gun

The Los Angeles Department of Water and Power conducted a water-spreading experiment from late October to early November by applying water to a site with a "rain gun" (a large pulse Rainbird sprinkler).

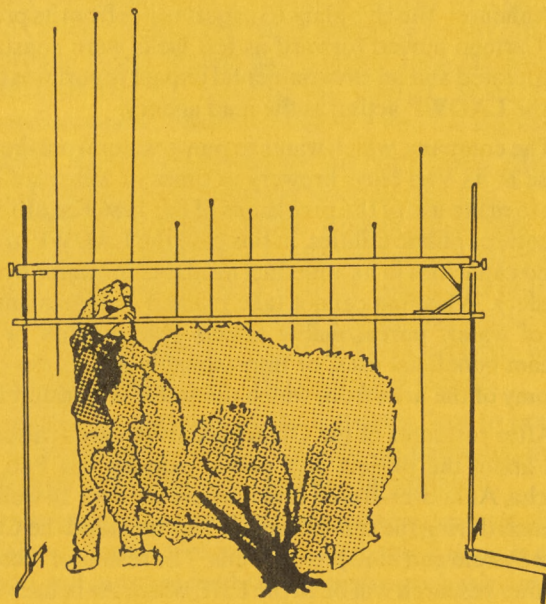
The experiment involved using the rain gun on a 1.4-acre area near Manzanar and observing the results to determine the device's usefulness in water management in the valley by noting its effectiveness in increasing soil water potential.

First, the Inyo County Water Department installed monitoring equipment at the site to track soil water movement. A control site was established for comparison. Then, using water from production well No. 75, the rain gun was fired at a rate of 12,000 gallons per hour for three non-consecutive days within a span of two weeks.

Preliminary results showed that soil water content did not greatly increase. On a seven-hour day of sprinkling, water penetrated the soil between two to six inches, depending on the location. However, the water table was temporarily drawn down seven inches during this same time period.

Other observations indicated drawbacks in using the rain gun for anything major: most of the water pumped went into the aqueduct and only a portion into the rain gun, the force of the water eroded the soil and knocked flowers and leaves off of shrubs, slight breezes skewed the spray, and puddling occurred all over the site.

The rain gun might be useful in limited situations, such as in preparation of an area impacted by groundwater pumping for revegetation.



Scheidlinger joins water commission

The newest member of the Inyo County Water Commission said she is eager to add her scientific knowledge to the decision-making process surrounding the tentative long-term agreement between Inyo County and the City of Los Angeles.

Carla Scheidlinger, a plant ecologist, replaces commissioner Paul Lamos, who resigned. Scheidlinger said she has "flirted around the edges of the [county] water department" for some time now and is ready to become more involved. The agreement, which she said she agrees with conceptually but would like to see strengthened in a number of ways, is what sparked her interest in the commission.

"It's interesting to me because of its biological connection," she said. "I'm looking forward to getting involved more and understanding how the science and politics are going to rub up against each other."

Scheidlinger said she has much to offer the commission because of her background in biological sciences, particularly in field research and vegetation monitoring. Complementing her bachelor's degree in biology and master's degree in ecology are several years of experience in technical research. She has written and co-written many scientific publications and technical and government reports, as well as presented abstracts at seminars.

"I'm qualified to evaluate this [scientific] information," she said. "I know what this kind of sampling means. It doesn't go over my head."

She also has a California teaching credential. She taught a class in plant ecology and the vegetation of the Eastern Sierra at Cerro Coso Community College in Bishop and held a two-year professorship at Deep Springs College.

But not all of her energies have been channeled into science and teaching. From 1988 to 1989, Scheidlinger was executive director of Wild Iris Women's Services in Bishop.

Scheidlinger is the only new commissioner this year. Commissioners Scott Kemp and Harry Holgate continue their terms and commissioners Ray Gray and Thaddeus Taylor, whose terms expired, have been reappointed.

New employees

The Inyo County Water Department has three new employees.

Leah Kirk, as a research assistant, is compiling information on water conservation and reclamation. Part-time staff assistant Brian Stange is cataloguing our aerial photographs. And Heidi Walters is our newsletter editor.

Comments, mailing list

If you have comments on the newsletter or would like to be put on our mailing list and receive future issues, send your name and address to: Inyo County Water Depart., 163 May St., Bishop, Calif., 93514.

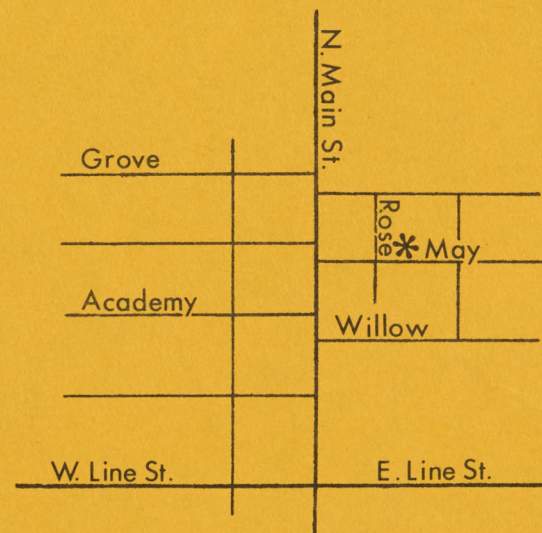
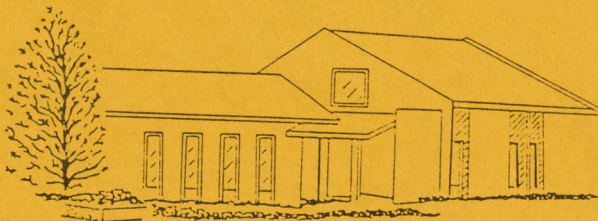
Quotes excerpted from:

Water and Power, William L. Kahrl. University of California Press, Los Angeles. 1982.

"The Eastern Sierra: Source and Beneficiary of California's New Water Law," Antonio Cosby-Rossmann, presented at the Eastern Sierra Water Symposium, Bishop, Calif., February 1989.

We've moved

The phone number is the same, 872-1168, but the Inyo County Water Department's address has changed. We've relocated to the building at 163 May Street that used to house Title Insurance and Trust, behind Valley Federal Savings. The move consolidates most mechanisms of the ICWD as well as provides additional space for expansion.



1989 pumping program

In the first six months of the 1989-90 runoff year, April through September 1989, LADWP pumped 74,850 acre feet for export and in-valley uses and 12,260 for enhancement/mitigation (E/M) projects. The second six months pumping program, October 1989 through March 1990, allows LADWP to pump 58,000 acre feet for export and in-valley uses and 10,000 acre feet for E/M projects. If LADWP pumps

as much as allowed under the second six months pumping program, the total amount of water pumped in the valley during the 1989-90 runoff year will be 155,110 acre feet.

Not all of the pump-equipped wells in the valley are operating. Of the 95 production and E/M wells in the valley, 26 are off because of both apparent and predicted low soil water potential in the areas from which they draw.

Laws	Bishop	Big Pine	Taboose-Aberdeen	Thibaut-Sawmill	Independence - Oak	Symmes-Shepard	Bairs-George	Lone Pine
236	137	(210)	108	103	(15)	(66)	76	344
239	138	218	(109)	104	(16)	(67)	95	346
240	140	219	110	155	59	(68)	343	390*
241	141	(220)	111	(159)	60	(69)	348	
242	207	22 2	114	351	61	(73)		
243	235	223	118	356	63	(74)		
244	238	(229)	(342)	380*	65	92		
245	371	231	(347)	381*	67	96		
246		232	(370)	382*	(77)	99*		
247		330			357	(345)		
248		331			383*			
249		332			384*			
354		341						
365		(352)						
375*		(374)						
377*		(375*)						
(385*)		(378*)						
(386*)		(379*)						
387*		(389*)						
388*								

This table shows the 95 pump-equipped wells in the valley. Bold type and parentheses indicate wells that are off. An asterisk indicates E/M wells. No asterisk indicates production wells.

Inyo County Water Dept.
163 May Street
Bishop, California 93514



Four-wing saltbush
Atriplex canescens

WATER REPORTER

Volume 3 Number 1 April 1990

Inyo County Water Department Bishop, Calif.

Introduction

The Owens Valley, along with most of California and portions of the West, has entered the fourth year of a drought. Impacts from the last three dry years are evident in the valley and the Inyo County/Los Angeles Standing Committee has adopted a conservative 1990-1991 pumping program appropriate to the severe conditions.

We discuss the drought and the pumping program first in this issue. We also provide updates on the Inyo/Los Angeles environmental impact report, the Green Book, and other Eastern Sierra water-related issues.

Inyo and L.A. set reduced pumping program for 1990-1991 runoff year

The Los Angeles Department of Water and Power has agreed to turn off all production wells in the Owens Valley except those providing a direct supply of water for in-valley uses or for replacing surface water supplied for those uses. As a result, not more than 89,500 acre-feet of groundwater will be pumped during the April 1, 1990 through March 31, 1991 runoff year. This amount includes all pumping for fish hatcheries.

The Inyo/Los Angeles Standing Committee adopted this 1990-1991 pumping program as the likelihood of a fourth year of drought became reality with the April 1 snowpack survey. From the survey, the LADWP is forecasting Owens Valley and Mono Basin runoff this year to be 48 percent of normal.

Up to about 71,500 acre-feet of water will be pumped for in-valley uses. This includes town water systems, fish hatcheries and irrigation. Except for some lands solely supplied by certain creeks which will have low flows because of the below normal runoff, it is anticipated that all in-valley water uses will be supplied as in the past. Also, past pumping practices on the Bishop Cone will be continued.

In the 1989-1990 runoff year, mitigation supply was cut from the normal 30,000 acre-feet to 21,000 acre-feet. This year, mitigation supply is being cut further to 18,000 acre-feet. Flows to the lower Owens River will be curtailed, although water will be provided to the ponds associated with the lower Owens River system: Twin Lakes, Goose Lake and Billy Lake.

A detailed annual pumping program will be considered at the May 3 Standing Committee meeting. But the pumping reductions are already in effect.

Note: At the April 2 Standing Committee meeting, people were told their questions would be answered in the Water Reporter. They will be. In future newsletters, those questions and others pertaining to the Inyo/Los Angeles tentative water management agreement will be answered.

Drought conditions worsen in Owens Valley and other areas of the West

Total April-September runoff in the Owens Valley and Mono Basin is forecasted to be less than half of normal. That, plus far below normal precipitation on the valley floor, puts the Owens Valley in its fourth drought year.

Some areas, such as Santa Barbara, have suffered an even longer severely dry period. Other areas in the West are suffering, as well.

In the Owens Valley, the dryness of the past three years already has severely affected all vegetation, from non-groundwater dependent vegetation on the fans to groundwater-dependent vegetation on the valley floor.

In groundwater-pumped areas on the valley floor, monitoring sites are showing low soil moisture attributable to drought and pumping.

Inyo County plant ecologist David Groeneveld said low soil moisture is noticeable at the monitoring sites within well fields as well as at control sites outside of well fields (where no pumping occurs). These sites are located in areas where the most sensitive, dominant vegetation grows.

"At [the monitoring] sites the vegetation has shown declines [in leaf area] that range from what we see at the control sites due to drought to a more profound loss of leaves," Groeneveld said. "In almost every case, we have shut the wells off in an attempt to avoid vegetation decline."

Groeneveld said effects of the drought probably will last beyond a return of normal runoff because the plants have decreased their leaf area to survive the drought and thus lost their vigor. It is unknown how long it will take plants to recover because it cannot be predicted when the drought will end nor how long it will take runoff to restore soil moisture to adequate levels for valley floor vegetation.

The drought is not just in the Owens Valley. Dry conditions prevail in Southern California cities. And drought in the four upper Colorado Basin states of Utah, New Mexico, Wyoming and Colorado has reduced Colorado River flow to 45 percent of normal.

In Santa Barbara, which has little groundwater and depends mainly on precipitation, residents face a 50 percent water shortage as the city enters its seventh dry year. The city depends on local reservoirs, which have dried up or are nearing depletion, and is not connected to outside water sources. Water rates have increased and, according to an April 11 *Los Angeles Times* story, Santa Barbara officials are considering either importing water from Northern California by oil pipeline, from Canada by barge, or building "the country's largest desalinization plant."

See Drought, page 2

Drought, from page 1

In Los Angeles, Mayor Tom Bradley said if residents do not voluntarily and promptly reduce their water use by 10 percent, they might face mandatory rationing.

LADWP expects to meet most of its demand for 700,000 acre-feet of water in 1990-1991 by purchasing more water than in the past from the Metropolitan Water District. Duane Buchholz, chief engineer in LADWP's aqueduct division, said the department has requested 430,000 acre-feet from MWD, the largest amount the department ever will have purchased. In 1989-1990, LADWP bought 329,800 acre-feet from MWD.

Buchholz said LADWP will be able to draw about 177,000 acre-feet from its local groundwater source in the San Fernando Basin.

Subject to decisions in upcoming hearings, LADWP is getting no water from the Mono Basin because of court rulings requiring LADWP to release water into Mono Lake streams and to curb diversions until Mono Lake has reached 6,377 feet elevation.

Inyo/Los Angeles**EIR still in progress**

Revised chapters for the environmental impact report being prepared by EIP Associates for Inyo County and Los Angeles are still being sent to each agency for consideration and suggestions for additional revision.

EIP's Joel Sabenorio said the EIR, which must identify mitigation measures for each significant impact that has been caused since 1970 by LADWP's water gathering to supply the second aqueduct, is taking longer to prepare than they had anticipated. He said a draft might not be out until May.

Because Inyo County wants to hold a 90-day public comment period following release of the draft EIR, and because the EIR must then be considered by Inyo County and Los Angeles governing bodies for approval, it will be impossible to meet the June 30 deadline by which the Third District Court of Appeals in Sacramento must receive the final EIR. At the March 5 Standing Committee meeting, Inyo County and Los Angeles officials discussed requesting an extension from the court. They took no action, concluding it would be better to complete the draft before requesting an extension.

LADWP reviewing draft of the Green Book

A draft version of the Green Book prepared by the Inyo County Water Department was delivered April 9 to the Los Angeles Department of Water and Power for review.

The Green Book is a technical appendix to the environmental impact report and to the agreement between Inyo and Los Angeles and defines theories and procedures used in the past, now and to be used in the future for managing groundwater pumping and surface water and monitoring the Owens Valley's environment. The draft of the Green Book

contains sections on vegetation management, vegetation mapping, vegetation monitoring, hydrology and future cooperative studies.

Eastern Sierra**Wells for sprinklers on Owens Lake completed**

Drillers have completed six new wells on Owens Lake. The three production wells and three monitoring wells will be used by the Great Basin Unified Air Pollution Control District to test the effectiveness of using sprinklers to curb dust during wind storms. One monitoring well and two production wells are on the north side of the lake, near the delta, and one monitoring well and one production well are on the southeast side. Ellen Hardebeck, the district's air pollution control officer, said five wells that have been tested are "yielding really well."

"Apparently there's plenty of water," she said.

The sixth well has yet to be tested. It is near Keeler and will be for monitoring.

Construction of the sprinklers, which are being designed, begins in the fall after completion of the bid process. The sprinkler test, involving turning on the sprinklers a couple of days before predicted storms, begins in September or October and will run for a year. Hardebeck said the district has been predicting storms by using a computerized weather service. During the test, if the weather service predicts winds of such velocity that dust storms will result, the sprinklers will go on to wet the dry lake surface in advance.

"One thing we want to find out from the tests is how far in advance we should sprinkle," Hardebeck said. "We also want to know how much water to put on the surface, what kind of pattern we should use, and what sort of materials we should use that don't corrode."

She said the district also will use a wind tunnel during the tests to measure under controlled conditions the amount of emissions of PM-10 (particulate matter of 10 microns or less diameter) per acre before and after sprinkling.

Flows released down Parker, Walker creeks

Following compliance by the State Water Resources Control Board with court orders to modify the Los Angeles Department of Water and Power's water diversion licenses, the LADWP has begun releasing water down the lower portions of Parker and Walker creeks.

April 4, the SWRCB inserted state Fish and Game Code conditions into the LADWP's water diversion licenses which require the avoidance of impacts to fisheries below dams.

The water board had orders, upheld by the state Supreme Court a year ago, to revise the water licenses to comply with the Fish and Game codes. But the board declined to modify the licenses until it completes multi-year studies on Mono

See Mono Basin, page 3

Mono Basin, from page 2

Basin fisheries and Mono Lake levels. The Mono Lake Committee, Audubon Society and California Trout asked the Third District Court of Appeals to order immediate compliance with the codes and in March the appeal was granted, with the final order left to El Dorado County Superior Court Judge Terrence Finney.

The multi-year studies, which will be part of an environmental impact report, will proceed as planned and probably be completed by 1992. They will be useful in refining (and setting final) flow schedules, said Ilene Mandelbaum, Eastern Sierra representative for the Mono Lake Committee.

A court injunction last year resulted in increased flows down Lee Vining and Rush creeks.

A hearing is set for May 1, 2 and 3 in Finney's court to determine interim flow amounts for all four of the Mono Basin creeks.

May hearing set to determine Mono Lake level

An evidentiary hearing will be held May 29 to determine what Mono Lake's water level should be. Last year, a court-ordered preliminary injunction required that Mono Lake be raised to and maintained at a minimum elevation of 6,377 feet, and greater flows down Lee Vining and Rush creeks began. At the May hearing, Judge Finney will consider whether to continue or modify the preliminary injunction.

Mono Lake Committee's Ilene Mandelbaum said it is unlikely, with the forecasted below-normal precipitation for the Mono Basin, that the lake will reach 6,377 feet. It is at 6,376 feet.

"It will probably peak in the next month or so and then it will begin to drop again," Mandelbaum said.

LADWP changes

Wickser is new chief engineer of water works

As the Los Angeles Department of Water and Power's new chief engineer of water works and assistant general manager, Jim Wickser said he hopes to focus on the main concerns facing the department in the next decade and beyond: water quality and water supply.

Wickser, who was assistant chief engineer of water works, replaces Duane Georgeson. Georgeson resigned March 1 to become assistant general manager at Metropolitan Water District.

Wickser said the department is looking for means to improve the quality of its water supplies, including covering reservoirs to block light and thus reduce algal growth.

As for water supply, he said he hopes to see the department implementing more water conservation measures such as through mechanical means (low-flush toilets, water-saving

shower heads) and through increasing irrigation efficiency and buying the resulting excess agricultural water.

Wickser said LADWP has an increased interest in water conservation because of decreasing reliability of certain water sources and an awareness of environmental concerns.

One source from which the department faces a reduced water supply is the Eastern Sierra. Recent court cases have required the department to release more water down Mono Lake streams as well as to allow more water to flow into the lake to raise its level. In Inyo County, final approval of a tentative agreement between the county and the LADWP would result in the amount of water the department draws from the Owens Valley being dependent upon environmental considerations.

"I think the tentative agreement we have with [Inyo County] is evidence that we are continuing with our commitment to not damage the environment," Wickser said. "I think one of the chores ahead of us is to look for water elsewhere. We're recognizing that it's going to be harder to get water from the [Sacramento] Delta. We know that our Colorado River supply is going to be reduced [when Arizona and Nevada start using their share]. And we're decreasing our supply from the Owens Valley."

Environmental mission for new commissioners

With its two newest commissioners, Dorothy Green and Mike Gage, the Los Angeles Department of Water and Power might find itself on a path toward more environmentally oriented management.

"Mayor Tom Bradley gave Mike and me the charge of making the department an environmental trendsetter," Green said.

Green and Gage replace Jack Leeney and Walter Zelman, who resigned earlier this year.

Green, who said she has spent the past 20 years of her life as an environmental activist, is president of Heal the Bay, an environmental group fighting to clean Santa Monica Bay and, with the Mono Lake Committee, heading a water conservation campaign to protect the bay and Mono Lake.

"My concerns are deep in terms of environmental protection," she said.

Gage, who works for a San Fernando Valley developer, was deputy mayor of Los Angeles from June 1987 to December 1989 and served as an assemblyman in the state legislature from 1969 to 1976. He has developed a strong environmental record. Gage said he, like Green, takes the mayor's charge seriously.

"I think people are more aware of the impact we have on our planet," he said. "I believe the department as individuals and as a collective group responds to changing times and hopefully we'll provide leadership in meeting environmental challenges. I think I'm going into this with a fairly open mind."

Gage and Green said water conservation and reclamation are high priorities for the department.

Inyo County starts 1990 field season

Inyo County Water Department scientists began the April-September 1990 field season by looking for potential new monitoring and control sites using aerial photographs, vegetation parcel maps and on-site inspection.

These sites, if established, would be added to the 31 sites already in place in the valley.

Monitoring at these sites is year-round, with researchers taking monthly soil moisture and depth to water table measurements and doing site assessments to record visual changes, if any: for example, new plant growth, increased cattle use, human disturbance.

However, field work intensifies between April and September when scientists begin vegetation monitoring. This includes running point-frame transects to measure the leaf area of plants within the transects. The leaf area measurements will be used to calculate leaf area index, which is used to determine the water needs for native plant species in the valley.

Vegetation monitoring also includes taking recruitment inventories at each site, which means noting the number and composition of young plants within the transect. The inventories, which will occur at the time of the transect readings, tell whether native or weedy species within the transect are propagating and provide information on succession. This information is helpful in noting changes within plant communities.

Starting April 16 and lasting for about two weeks, two teams of two scientists (three from the county and one from the Los Angeles Department of Water and Power) go to each of the monitoring and control sites and run 30-meter point-frame transects.

In June and July, the summer portion of the field season takes place. Because the plants have reached their maximum leaf coverage by this time, monitoring increases with scientists running 100-meter transects instead of 30-meter transects. At this time, every transect is photographed from both ends to visually document changes for comparison from year to year.

Also this summer, aerial photographs will be taken of all of the monitoring sites and other areas of interest in the Owens Valley.

The summer portion of the field work produces the most data, which is supplemented by the spring and fall transect data.

The field season concludes in the fall, when the 30-meter transects are repeated.

Information gathered during the field season, along with data from the year-round monthly soil moisture and water table monitoring, is considered in establishing groundwater pumping limits in the valley.

Meetings

Inyo County Water Commission, 7:30 p.m. April 25 at Big Pine Town Hall.

Inyo/Los Angeles Standing Committee, 1 p.m. May 3 in Los Angeles at the LADWP offices, 111 N. Hope St.

Comments, mailing list

If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif., 93514. You also may call us at 872-1168.

Inyo County Water Department
163 May Street
Bishop, CA 93514

WATER REPORTER

Volume 3 Number 3 April 26, 1990

Inyo County Water Department Bishop, Calif.

Introduction

Much confusion still exists over the status and the future of the tentative long-term agreement between Inyo County and Los Angeles on water management in the Owens Valley.

First in this newsletter, Inyo County Water Director Greg James explains why he believes the County should not abandon the agreement at this time as some people desire.

The second article is the County's responses to demands by a group that calls itself "People Who Love the Valley."

Rational protection for Owens Valley

"Renounce the Inyo/LA Water agreement and immediately place the fate of the Owens Valley before the judges and justices of the courts!" "Stop the damn pumps!" "Do these things now and fire Greg James, or be forced from office!"

Such are the public demands pouring in on the Inyo County Board of Supervisors from certain individuals and groups. These people see such a course of action as the only way to save the Owens Valley.

I strongly disagree. There is a better, more reasonable and rational alternative that may well result in a higher level of permanent protection for this valley. And, while this alternative is being pursued, the valley is not at risk. Pumping has been drastically reduced, irrigated lands will continue to be green, and other in-valley water uses will continue to be supplied during this fourth drought year.

If adequate protection for the valley cannot be attained in the coming months through the proposed agreement and the environmental review process, the Board of Supervisors publicly have pledged to resume the water war using every means at their disposal to seek protection of this valley's environment.

This is not the time to abandon the proposed agreement.

There is no doubt that the natural conditions of this valley have been altered and diminished because of water gathering and export. Initially the Indians diverted water from streams to spread over their crops. Later, diversions were greatly expanded and canals and ditches were dug to irrigate up to 75,000 acres. At the turn of this century, Los Angeles arrived on the scene, built an aqueduct, and exported the water out of the valley. Los Angeles then bought out the ditch companies, the farmland, the residential and commercial properties, and wound up owning virtually the entire valley.

When export of the surface water was no longer enough for its needs, Los Angeles built a second aqueduct and began pumping water from beneath the valley. Although there were many bitter and prolonged fights over the years, it was not until 1972 that the Inyo County government formally sued Los Angeles over the impacts of its groundwater pumping and surface water gathering for the second aqueduct.

Following more than a decade of litigation, it became apparent that Los Angeles finally was willing to enter into serious discussions with the County over protection for the valley's environment and joint water management. As a result, in 1984 Los Angeles and Inyo County agreed to a historic four-year truce during which time groundwater pumping would be jointly managed, irrigation and other in-valley uses maintained, certain mitigation measures implemented, water rates for Los Angeles-owned town water systems reduced, and impartial environmental studies conducted. The overall goal of this interim agreement was the development of a long-term water management plan.

Under this interim agreement, the effects of Los Angeles' groundwater pumping and other activities on the environment of Owens Valley has been extensively researched and studied. The study results draw upon the expertise of many participants including U.S. Geological Survey, U.S. Soil Conservation Service, researchers and professors from several universities, other agencies, Los Angeles, and Inyo County. Funding for the studies came from Los Angeles, the state Water Resources Control Board, U.S.G.S., and Inyo County.

The County and Los Angeles have used the study results in hammering out a proposed agreement which provides for a sustainable and improved valley environment. It is hard to believe in view of the history, but Los Angeles has indeed made an initial commitment to an enforceable agreement that has as one of its primary goals the protection of valley floor vegetation and in-valley water uses, as well as the avoidance of groundwater mining, the restoration of approximately 50 miles of the Lower Owens River, improvement of county parks and campgrounds, return of the town water systems to local control, reopening water supply ditches in Big Pine, and releasing limited amounts of Los Angeles-owned land for public and private use.

The environmental effects of this proposed agreement and all significant adverse impacts that have occurred as a result of supplying the second Los Angeles aqueduct will be described in an environmental impact report (EIR) now being prepared by EIP Associates of San Francisco, together with Los Angeles and Inyo County. This EIR must identify a mitigation measure for each past and future significant environmental impact. The content of this EIR must be acceptable to the County, and Inyo will only accept a document that is in full compliance with all laws and court orders.

Once a draft EIR is completed, it will be made available for public review and comment for a 90-day period. Several public meetings on the draft will be held during this period. Following this review, a final EIR will be prepared which will address all comments that are received.

Only after completion of the final EIR, and after public meetings on the EIR and the agreement, will the Board of Supervisors consider approval of the agreement. A final decision probably will not be made until near the end of 1990.

One of the strongest environmental safeguards the agreement offers the valley is that it will be an enforceable final court judgment. Because of this, the goals which are the heart of the agreement will be extremely difficult to change or disregard. While the paramount goals will be protected from change, there must be an ability to revise the methods of achieving the goals whenever they can be improved. Thus, if conditions, studies, or research indicate that the methods should be changed to better attain the goals, the agreement contains provisions for their modification or replacement. Moreover, if there is disagreement over the need for studies or a change in methods, the agreement provides for rapid and binding dispute resolution.

Among the methods for protecting vegetation are provisions for turning off wells if soil water available to vegetation is projected to fall below the estimated water needs of the vegetation. These were developed using the best available information from the studies. Their purpose is to prevent damage to valley floor vegetation. Since 1988, many wells have been turned off under these provisions, and through agreement, many more have been turned off in an attempt to further protect the vegetation.

Even with these wells off, due to the drought, water tables lowered by pumping in some areas have not recovered sufficiently to replenish the soil water available to valley floor vegetation. This has occurred at a time when precipitation, the vegetation's primary source of water, has been inadequate during the past three years to supply the water needs of the vegetation. The effects of this lack of precipitation are obvious to all who observe the valley floor or the alluvial slopes which rise from the valley to the mountains.

Except for an area of approximately 300 acres near Five Bridges, the effects on vegetation of groundwater pumping during the past three years are not as obvious. Therefore, the County is, has, and will continue to make every effort to document whether or not the degree of decrease or change in vegetation in areas affected by groundwater pumping has been greater than in vegetation affected only by the drought. If decreases or changes have occurred due to groundwater pumping that are inconsistent with the goals of the agreement, the County will do everything possible to seek restoration of the affected vegetation through mitigation.

Also, in an attempt to avoid a recurrence of these conditions, the County has invoked the provision of the proposed agreement that allows for modification of methods of achieving its primary goals. The County is seeking a more conservative approach to future groundwater management. It has called for management to allow water tables to recover to the rooting zones of vegetation, and be maintained there until extensive studies have determined whether groundwater pumping has, or has not, resulted in decreases and changes in vegetation.

The County's position is that if no such decreases or changes have occurred, operation of the existing well turn-on and turn-off provisions can resume. However, if decreases or changes inconsistent with the goals of the agreement are documented, the well turn-on and turn-off provisions must be

permanently modified or replaced to avoid a recurrence of such vegetation damage. The County will approve the agreement only if it contains this policy or some acceptable variation of it.

Without doubt, there is much uncertainty and many challenges facing both Inyo and Los Angeles in the coming months, but I believe that it just doesn't make sense to renounce the agreement and submit the valley's fate to the courts at this time.

I can't predict the future, but Los Angeles' willingness to turn off wells and abide by the other provisions of the agreement during this prolonged drought, recent changes in the water management hierarchy in Los Angeles, and a growing awareness of the value of our global environment, all give cause for hope that a comprehensive, legally adequate EIR, and a strong environmentally protective agreement can be realized.

If these accomplishments are not satisfactorily achieved through discussion and negotiation in the coming months, the time will then be right to once again enter into battle. If, however, there is success, long-term protection of the valley will be virtually guaranteed and a costly, protracted legal and legislative fight with an uncertain outcome for the valley's environment can be avoided.

Greg James

Inyo County Counsel and Water Director

County responds to group's demands

A group that calls itself "People Who Love the Valley" has submitted eight demands regarding the Inyo County Water Department and water management in the valley to the Inyo County Board of Supervisors, insisting upon compliance.

The board and department have not complied with the demands, for reasons given in the following responses.

Demand 1: We demand the Inyo County Board of Supervisors immediately terminate the services of Special Counsel Greg James and all outside consultants. These vacated positions are to be filled, by a competitive selection process, with professionals who have proven abilities in water, environmental engineering, air quality, and litigation.

Response: The Board of Supervisors have the utmost confidence in Greg James and all staff and consultants in the Water Department. These competent professionals have worked long and hard in seeking permanent protection for the environment of Owens Valley. It would be a major setback to the valley if these people were forced to resign or be fired.

Demand 2: We demand the Inyo County Board of Supervisors, using Special Counsel James' replacement, seek from the Third Appellate Court, an immediate restraining order prohibiting all pumping for export and mitigation in Inyo County.

Response: Acting under existing court orders, it has been agreed by the County and Los Angeles that during the 1990-91 runoff year (April-March), only those wells necessary to

directly supply water for in-valley uses or to replace surface water supplied for such uses will be operated. Total pumping for the full runoff year will not exceed 89,500 acre-feet. During this same period, 89,500 acre-feet will be supplied for Owens Valley uses. Although some pumped groundwater will be physically exported from the valley, an equal amount will be diverted from surface water supplies to meet in-valley needs.

Further, as required by existing court orders, except for some in-valley uses solely dependent on diversions from certain creeks which will have naturally occurring low flows due to the drought, all irrigation, stockwater, recreation, and wildlife uses supplied by LADWP are anticipated to be maintained as last year. This will occur this year even though many agricultural water uses throughout the state are experiencing 50 percent and greater reductions in water deliveries due to the drought.

Demand 3: We demand you petition the Third Appellate Court to order LADWP to begin at once to restore all surface water flows and groundwater levels to that state which existed in the early 1970s, when the court first ordered LADWP to prepare an EIR.

Response: The California Environmental Quality Act and court orders concerning LADWP's Owens Valley pumping require that all significant environmental impacts that have resulted from LADWP's water gathering operations resulting from the availability of the second aqueduct in 1970, be identified and mitigated. This includes impacts caused by groundwater pumping, surface water changes, and reductions in irrigated lands since 1970. This will occur through the EIR process on the long-term agreement. Further, the County's position, which has been presented to Los Angeles in the draft Green Book is that the following policy should govern future groundwater management under the long-term agreement:

Water tables in all areas of Owens Valley be allowed to recover to the rooting zone of the vegetation. Once such recovery has taken place, groundwater pumping should be managed to not lower the water tables below the vegetation rooting zone until extensive plant recovery and other appropriate studies have been completed. The purpose of these studies would be to determine whether a significant change in live cover and species diversity has occurred in areas affected by groundwater pumping as compared to areas that have not been affected by groundwater pumping.

If the results of the studies show that the operation of the provisions for management of groundwater pumping contained in the proposed Inyo/Los Angeles water agreement have not resulted in, and probably will not result in, significant decreases or changes in vegetation, then the operation of these provisions would be resumed. If the results of the studies show the opposite, then the well turn-off and turn-on provisions of the agreement must be revised or replaced to effectively achieve the goals of the agreement.

Concerning surface water flows, the proposed agreement requires all existing surface water flows to be maintained and the vegetation dependent on these flows protected. Maintaining these flows leaves them essentially as they were in 1970. Additionally, the agreement requires a restoration of flow in

approximately 50 miles of Owens River, which has been dry since LADWP diverted it into its aqueduct in 1913.

Demand 4: We demand the Inyo County Board of Supervisors petition the Third Appellate Court to order LADWP immediately to spread this year's spring runoff water over all Owens Valley ranches and meadowlands capable of recharging the groundwater basin. Surface water spreading is to continue until the groundwater basin has been recharged to 1970 EIR conditions.

Response: Existing court orders, the current Inyo/Los Angeles water agreement, and the proposed long term agreement all require that all in-valley water uses that existed in 1981-82, and all new in-valley uses commenced since then be maintained. This will be done during this fourth drought year. It should be noted that the highest volume of groundwater recharge occurs on the alluvial slopes on the west side of the valley, not on the ranches and meadows on the valley floor. Recovery of the valley water table will occur once the drought ends. The County's position is that water levels must recover to and be maintained in the effective rooting zones of the vegetation (see response to Demand 3).

Demand 5: We demand the Inyo County Board of Supervisors petition the Third Appellate Court to order immediately that LADWP provide Big Pine rancher Ken Steward and any other Inyo County residents facing similar conditions all the surface water their normal ranching operations require until the groundwater table beneath their property is restored to pre-EIR condition.

Response: Current court orders require and the County is committed to fair and equitable mitigation for any private well owner whose well is adversely affected by groundwater pumping by LADWP. The proposed long-term agreement guarantees that such mitigation will be implemented.

Concerning the Steward Ranch, since the County determined that groundwater pumping from enhancement/mitigation wells that were constructed in the Big Pine area in 1986, was contributing to a drawdown of water tables under the Steward Ranch, the ranch owners have annually been fully compensated by LADWP for all reduced alfalfa production and for future costs of re-establishing any lost alfalfa. LADWP also has lowered the pump in the domestic well at the ranch.

The following offer has been made to make the ranch owners whole, and to permanently mitigate the drawdown problem that the ranch owners say has existed since 1972:

1. A new well would be drilled and equipped and connected to the ranch's reservoir at no cost.
2. Power bills for this well and for the second irrigation supply well on the ranch will be adjusted so that the ranch does not pay the cost of lifting water from a depth greater than the water levels that existed in the wells in 1972. The ranch would pay the cost of lifting the water from a depth equal to or less than 1972 levels.
3. The power adjustment would apply to a quantity of water that is sufficient to irrigate alfalfa on each acre of the ranch.

4. The power adjustment would apply to future owners of the ranch.

The ranch owner has not accepted this offer.

Demand 6: We demand the Inyo County Board of Supervisors petition the Third Appellate Court to order the implementation of Inyo County's Groundwater Management Ordinance and Management Plan. The no-nonsense monitoring requirements of this plan would put an immediate stop to over-pumping in Owens Valley.

Response: The County believes that the protections of the environment of Owens Valley contained in the proposed long-term agreement (which will become an enforceable court judgment if approved) afford an equal level of protection as the Ordinance without the risk of invalidation of the Ordinance by a court. The current year's pumping program and the County's proposed management of future groundwater pumping will further avoid damage to the valley's environment. If, in the coming months it does not appear that a good faith effort is being made to comply with the goals of the long-term agreement, the California Environmental Quality Act, or applicable court orders, the Board of Supervisors will not approve the agreement and will pursue all possible legal, legislative, and other means to protect the environment of Owens Valley. This would include seeking appellate court validation of the County's Ordinance.

Demand 7: We demand the Inyo County Board of Supervisors to petition the Third Appellate Court to order LADWP to fill the Crowley Lake reservoir for purposes of recreation, to enhance wildlife, agricultural purposes, and groundwater recharge; at the same time to formally request Southern California Edison Company to keep full Sabrina and South lakes throughout the summer season.

Response: Under the current drought conditions, if LADWP were required to immediately fill Crowley Lake, no

water could be released for many months into Owens River. Even if LADWP were to gradually fill Crowley Lake during the coming year, only a very limited flow could be maintained in Owens River. This would have a devastating impact on the Owens River fishery, riparian vegetation and recreational uses. Although the County desires to see Crowley Lake refilled, to require its filling this year would result in severe and possibly irreversible environmental impacts.

If Southern California Edison were to fill Lake Sabrina and South Lake this summer, virtually no water would flow down Bishop Creek. Not only would this violate the Chandler Decree, but it would deprive much of the Bishop area (including the Indian reservation) of irrigation water and would cause major impacts to the Bishop area economy, fisheries, and aesthetics.

Demand 8: We demand the Inyo County Board of Supervisors hold a special meeting in Bishop, at the Bishop Civic Auditorium, on or no later than April 10 to address these demands. If you fail to hold this meeting and comply with ALL these provisions, you give us no choice but to start recall proceedings.

Response: None necessary.

Meetings

Inyo/Los Angeles Standing Committee, 1 p.m. May 3 in Los Angeles at the LADWP offices, 111 N. Hope St.

Comments, mailing list

If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif., 93514. You also may call us at 872-1168.

Inyo County Water Department
163 May Street
Bishop, CA 93514

WATER REPORTER

May 17, 1990 Volume 3 Number 4

Inyo County Water Department

Introduction

Water issues in Inyo County of high public interest traditionally take place on the western boundary, mostly in the Owens Valley. But threats to water resources exist elsewhere in the county.

In this issue, we tell of a massive water transfer plan in Nevada proposed by the Las Vegas Valley Water District which poses a potential threat to springs, desert bighorn sheep, pupfish and tourism in southeast Inyo County.

A second story covers another water issue in the same area of Inyo County: the case involving the federal Department of Energy's proposal to place a high-level nuclear waste repository at Yucca Mountain in Nye County, Nevada.

On page 3, find a report on the May 3 Standing Committee meeting in Los Angeles, plus an update on Anheuser-Busch's Cabin Bar Ranch proposal. On page 4, we begin a new Question/Answer section.

Las Vegas water transfer plan poses threats to southeastern Inyo County

Fears that a massive inter-basin water transfer scheme in Nevada might endanger Death Valley springs and wildlife have prompted Inyo County to consider filing a protest.

Last October, the Las Vegas Valley Water District filed with the state engineer 146 applications for permits to appropriate water in Clark (its own county), Nye, Lincoln and White Pine counties. Just 39 of those permits would be in Clark County. The district proposes to import to Las Vegas 860,000 acre-feet/year of ground and surface water from 26 valleys in the four Nevada counties.

Greg James, Inyo County Counsel and Water Department Director, said he plans to recommend to the Inyo County Board of Supervisors that Inyo County either file a formal protest or join the three rural Nevada counties in their protests. He said a common aquifer system from which water eventually surfaces at points in Inyo County near the Nevada-California border makes the project a threat to the sole water source for Death Valley National Monument's Furnace Creek area, as well as the Shoshone-Tecopa area.

The monument's resources manager, Jeff Aardahl, is assisting the National Park Service's water resources staff in researching geologic reports and other scientific documents on the areas from which LVVWD wants to withdraw water.

"We took a look at the total and we tried to locate all of the diversion points and wells that would be removing groundwater from the aquifer that eventually empties into Death Valley," Aardahl said. "We estimate that about 80 of the wells may have an adverse impact on the aquifer that ultimately provides water for springs at Death Valley, sustains Ash Meadows and the Devil's Hole area [on the Nevada side] and eventually flows into the Amargosa River."

The 80 wells would be spread throughout the counties. The geologic complexities of the underground aquifer and its connection to other aquifers makes it a possibility that drawdown of an aquifer in east central Nevada, for example, might cause eventual drawdown of an aquifer in Inyo County.

"We're talking about something that may have a long-term lag and impact," Aardahl said. "Some of the wells in the diversion are so far away, if there's an overdraft it may not be felt for a long, long period of time."

Aardahl said if flow through the aquifer declined even slightly, it could dry up small seeps and springs "to the point where natural populations of animals would vanish or decline."

Monument Superintendent Ed Rothfuss said such an impact would affect the very qualities that make Death Valley, which draws 700,000 visitors a year, a national monument.

"Several hundred springs on the east side of the monument are served by that aquifer," Rothfuss said. "If, and that's a big 'if,' things occur outside the park boundaries that cause impacts inside the park, our first and most serious concern would be the impact on the desert bighorn sheep and the pupfish. The value of the park would be diminished. Our second concern would be, if the impact were severe enough, then it could impact tourism."

Rothfuss said the park service is preparing a protest document calling for "good, sound environmental compliances" from Las Vegas.

"We want to encourage a stronger water-use ethic," he said. "Tucson is an example of a city that has instituted policies and laws that have greatly decreased its consumption. Water conservation, desert landscaping: All the people that live in the deserts ... need to look at those types of ethics."

The Nevada counties preparing protests, Lincoln, Nye and White Pine, also might demand a stricter water use ethic from Las Vegas. If anything, the counties might question the city's ethics in its push for continued growth. Steve Bradhurst,

See Las Vegas, page 2

'We're talking about something that may have a long-term impact.'

Jeff Aardahl, Death Valley National Monument Resources Manager

Las Vegas, from page 1

Nye County consultant who coordinates the opposition to LVVWD's proposal, is focusing on a part of Nevada water law that says water appropriations cannot occur if they are not in the public's interest.

"We don't think it's in the basic interest of the public to take water out of there and ship it south to sustain growth and development," Bradhurst said.

Las Vegas' population, now at 761,000, is expected to reach 1 million by the year 2001. The LVVWD, which draws its water from the Colorado River and county wells, served about 70 percent of the current population with 222,000 acre-feet of water last year. The 1989 Colorado River Water Budget projects that the Las Vegas Valley's growth will slow after the year 2000 because of limited water supply, reduced air quality, and other factors. By 2020, the population will have leveled at about 1.4 million people.

The valley's available firm supply of 438,000 acre-feet could support an urban population of about 1.1 million people or, with aggressive conservation, about 1.6 million people. LVVWD's requested 860,000 acre-feet could support an urban population of 1.2 million people or, with aggressive conservation, about 1.7 million people. Together these supplies could support up to 3.3 million people, more than twice the projected population of 1.4 million people by 2020, when the growth rate is expected to be leveled out.

Bradhurst said LVVWD's proposal, of a magnitude "probably unprecedented in the United States," threatens to lower the water table in the rural counties, resulting in dying vegetation, reduced air quality from more frequent dust storms once the vegetation is gone, and general environmental degradation.

Not only might the environment suffer but Las Vegas might end up paying for a project which could cost more than an alternative such as water conservation.

"I think hundreds and hundreds of individuals in Las Vegas will protest the project," Bradhurst said. "The price tag on building the transmission system alone is estimated at \$1.5 million."

(The LVVWD has said it will explore alternatives before settling on the interbasin groundwater scheme.)

Other adverse impacts might occur in Las Vegas. Mike Baughman, who represents Lincoln County and is preparing

a preliminary sketch of LVVWD's proposal, said air quality in the city might limit the project.

"Las Vegas has non-attainment status [exceeds air quality standards] now," Baughman said. "We have reason to assume, anything you do to assist growth makes it difficult to reach attainment status."

Baughman also is looking at possible benefits of the proposed project. He said the rural areas might gain protection from other water takers such as the Los Angeles Department of Water and Power, and from water investors. There is also the possibility of power generation for the local counties.

"There could be a pretty cheap power supply that they could use to attract industry," Baughman said.

Baughman said his research will help the counties position themselves on all of these issues, the good and the bad. Another angle he is exploring is the parallel that can be drawn between LVVWD's proposed project and the existing situation in the Owens Valley with the LADWP.

"It seems to us that there are certainly physiogeographic similarities," he said.

This is another reason for Inyo County's interest.

"The impacts suffered here could be expected to be repeated elsewhere," James said. "We have offered our assistance to the people in Nevada."

Protest coordinator Bradhurst also recognizes the parallel and said he welcomes Inyo County's assistance.

"It's not like we don't have a test case," Bradhurst said. "These rural counties in Nevada are looking at what has occurred in the Eastern front of the Sierras in Inyo and Mono counties. It's unfortunate, but we have a great example just by looking at you guys. We have 77 years of experience to learn from. Now we're facing a giant and trying to keep a giant from taking water from our rural areas."

Court ruling pending in Yucca lawsuit

Inyo County is still trying to convince the federal government that the nation's first high-level nuclear waste repository proposed to be located at Yucca Mountain in Nye County, Nevada, presents dangers to Inyo County's water, air and people.

Since August 1988, the county has written twice to the Secretary of the U.S. Department of Energy requesting to be designated as an "affected unit of local government."

But the DOE has denied the designation and, in the latest reply, said there are no potential impacts to Inyo County.

In August 1989, Inyo County sued the DOE over its decision. Esmeralda County, in Nevada, also has sued for affected status. The matter will be heard by the Ninth Circuit Court of Appeals this August.

Inyo County, which shares nearly 100 miles of common border with Nye County and is 14 miles from Yucca Moun-

See Yucca, page 3

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Yucca, from page 2

tain, contends the proposed repository could endanger its water, air and people through contamination by escaped radionuclides (radioactive particles). Inyo County shares a common aquifer with Yucca Mountain and is in the same drainage basin.

Under the Nuclear Waste Policy Act of 1982, a unit of local government contiguous with the unit of government in which a repository is proposed may be designated an "affected unit of local government." A 1987 amendment to the act requires the DOE to conduct a characterization study for the high-level nuclear waste repository at Yucca Mountain. The act requires Congress to fund designated affected governments so they may review the project and participate in the characterization study. A characterization study consists of exploring the site to determine if it can safely hold a repository and examining surrounding areas to determine all possible impacts.

Even though the DOE has denied Inyo County's request for the designation, it has granted the designation to Clark and Lincoln counties in Nevada, both of which are much farther from Yucca Mountain than is Inyo County.

Inyo County Assistant Counsel Paul Bruce, who is handling the case, said there is plenty of scientific evidence that Inyo County could be impacted severely by the repository.

Inyo County and Yucca Mountain are in the Alkali Flats/Furnace Creek groundwater sub-basin within the Great Basin. This is an actively seismic region and numerous faults and fractures allow relatively rapid groundwater migration. Underground nuclear testing at the Nevada Nuclear Test Site at Yucca Flat, near Yucca Mountain, might cause further fracturing.

This means radionuclides from the repository might escape the repository during the 10,000 years in which it is supposed to hold the high-level waste. Escaped radionuclides could get into streams that drain into the basin, infiltrate the groundwater, and perhaps surface at Alkali Flats and in Death Valley's seeps and springs, endangering the only water source for the Inyo County communities of Shoshone, Tecopa, Death Valley Junction and Furnace Creek.

Other adverse impacts might occur. Inyo County might face socioeconomic effects from the influx of residents employed at the repository. Transportation routes, either roads or rails for vehicles carrying waste to the site, might cut through Inyo County.

"The DOE says there are no proposed routes through Inyo County," Bruce said. "But one of the proposed routes is Nevada Highway 373 and the only way to get to it is through [California] Highway 127 in Inyo County. To the DOE, everything seems to stop at the border: the roads, the aquifer, the geology."

While the DOE ignores Inyo County's vulnerability to the repository when it comes to granting it affected status, the DOE's Radiological Monitoring Plan and Socioeconomic

Plan do not. More than 25 percent of the area being studied is in Inyo County. This amounts to 2,250 square miles of the county. The DOE plan proposes air, soil and water sampling and groundwater monitoring at sites throughout Inyo County. Even more monitoring sites are adjacent to Inyo County just across the border.

The DOE plan also outlines 94 site characterization activities to take place in Inyo County to determine socioeconomic impacts.

But in reports, the DOE does not recognize there might be potential impacts to Inyo County.

Bruce said the DOE did not base its denial of Inyo's request for designation on scientific or economic facts.

"They refused for political reasons," he said. "California has a large constituent number and a large representation in the House. They don't want to tangle with California."

If Inyo County wins its case against the DOE, it will receive necessary reports to review the project. It also will be involved in the planning stage. The DOE will have to consult with and listen to Inyo County.

But even then Inyo won't receive the money that the Nuclear Waste Policy Act directs Congress to provide. That only applies to Nevada counties. Inyo County will have to request funding from Congress.

"If the County wins, the DOE probably will try to amend the Act to further exclude Inyo County," Bruce said. "If the County loses, we will ask for reconsideration."

Eastern Sierra

Early June deadline set for Inyo/LA draft EIR

An administrative draft of the environmental impact report for Inyo County and the Los Angeles Department of Water and Power must be completed by early June, according to a directive from the Inyo/Los Angeles Standing Committee, which met May 3 in Los Angeles.

When the draft is completed and reviewed by both parties, it will be released for a 90-day public review period (probably beginning in mid-June). Also, Inyo and Los Angeles will submit the draft to the Third District Court of Appeals in Sacramento. At that time, they will request an extension of the original, court-set deadline of June 30 by which the final EIR is supposed to be completed.

Anheuser completes draft EIR for water project

Anheuser-Busch Company has completed a second draft of an environmental impact report for a proposed water pumping project at its Cabin Bar Ranch near Olancho.

The company, which wants to use the pumped water at its Van Nuys brewery in times of water cutbacks, has sent the draft EIR to the lead agency, the Los Angeles Department of Water and Power, for review. It is unknown at this time when the draft EIR will be released.

Questions/Answers

In this new section of the newsletter we will answer many of the questions people are asking about Inyo County Water Department and Los Angeles Department of Water and Power projects in the Owens Valley, and about the tentative Inyo/Los Angeles long-term water management agreement and related documents.

The questions come from several sources: Standing Committee meetings, letters submitted to the Inyo County Water Department, and lists provided by the Inyo County Water Commissioners of questions their constituents ask them.

Question: Why does LADWP put in a new well every time there's a new enhancement/mitigation project?

Answer: Inyo County and LADWP began a number of enhancement/mitigation (E/M) projects after they formalized an interim, five-year agreement in 1985. The agreement required that water for these projects be supplied by increased groundwater pumping. New wells had to be drilled, either to provide water directly to an E/M area or, more commonly, to replace equally water normally pumped or diverted for the aqueduct now being used on an E/M project.

(The January 1989 *Water Reporter* thoroughly explained E/M projects. If you missed that issue, write to us and we will send you a copy.)

Question: Why is LADWP going to drill three new wells in the Bishop Cone area?

Answer: Under the tentative long-term agreement, LADWP proposes to drill 15 new production wells to "provide for increased operational flexibility and to facilitate rotational pumping" (section VI of the agreement document). LADWP proposes to drill five of these wells on the Bishop Cone.

Under the proposed long-term agreement, the annual amount of water LADWP can pump on the Cone cannot

exceed the amount of water used annually on Los Angeles-owned lands on the Cone. Inyo and LADWP are jointly conducting an audit of water use on the Cone to determine a method for measuring that amount.

Once the audit is completed, Inyo County will be able to independently verify the amount of water used on Los Angeles-owned lands. The impacts of LADWP's five proposed wells will be analyzed in the draft EIR on the proposed agreement.

Question: Who monitors the pumps to see that they aren't pumping when they're supposed to be off?

Answer: The Los Angeles Department of Water and Power compiles monthly reports describing well operations in the valley, such as which wells are off, which are on, and what the water from each operating well is used for (production for export, irrigation, E/M, etc.).

Inyo County currently lacks the personnel to conduct field verification of well operations and pumping amounts. However, Inyo's consulting hydrologist Bill Hutchison said he has been able to independently verify LADWP's well report data through computer modeling.

In the future, if the tentative agreement is approved, Inyo County will commence a formal program for verifying well status, groundwater pumping and in-valley water use. In the meantime, informal verification practices such as observations by the monitoring staff and by the public will continue.

Meetings

Inyo County Water Commission, 7:30 p.m. May 29 in the Supervisors' Room at the Courthouse in Independence.

Inyo/Los Angeles Standing Committee, 10 a.m. June 7 at the LADWP offices, 111 N. Hope St., in Los Angeles.

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WATER REPORTER

August 30, 1990 Volume 3 Number 6

Inyo County Water Department

Draft EIR out in Sept.; court allows another year for final EIR

The Third District Court of Appeal granted Inyo County and Los Angeles a 12-month extension to complete their final environmental impact report (EIR) on water export from the Owens Valley to supply the second Los Angeles aqueduct, which includes a joint long-term groundwater management plan or agreement. This means that Inyo County and Los Angeles will continue to follow the provisions of the proposed agreement in managing the water resources of the Owens Valley. The extension begins from the date of public release of the draft EIR.

Inyo County and Los Angeles have submitted their final comments on the draft EIR to EIP Associates, the environmental consultants preparing the EIR. EIP estimates the editing, completion of maps, tables, charts and figures, and the printing will take at least a month. By Sept. 28, EIP plans to have the draft EIR ready for release to the public for a 90-day review and comment period.

The draft EIR consists of 20 chapters and several technical appendices. The appendices include the agreement on the long-term groundwater management plan in its legal form as a stipulation and order, the Green Book, plus information on wildlife species and air quality monitoring data.

The purpose of the EIR is to identify and discuss the overall environmental consequences to the Owens Valley environment of water management practices and facilities that were implemented or constructed since 1970 to supply

the second Los Angeles aqueduct, and of the projects and water management practices contained in the agreement. The EIR is written to comply with informational requirements of the California Environmental Quality Act (CEQA) as mandated by the Third District Court of Appeal.

Inyo County, as the responsible agency (Los Angeles is the lead agency) would use the EIR to assist it in deciding whether to approve the proposed agreement between Inyo and Los Angeles on groundwater management in the valley.

The title of the EIR is, "Water from the Owens Valley to Supply the Second Los Angeles Aqueduct -- 1970 to 1990; 1990 Onward Pursuant to a Long-Term Groundwater Management Plan." The following is a list of the crucial chapters in the EIR with brief descriptions of their contents:

INTERVIEW:

Noted environmental attorney Antonio Cosby-Rossmann offers insight on the proposed Inyo County-Los Angeles water management agreement. Page 2.

Introduction

This chapter provides an overview describing the setting and background of the proposed project, the intended use of the EIR, the EIR review and certification process, and the organization of the EIR.

History of Water Development in the Owens Valley

This chapter discusses the history of water export to Los Angeles with the first aqueduct, the Mono Basin aqueduct extension and the second aqueduct, and of groundwater ex-

See Draft EIR, page 5

Inyo to bolster monitoring, research

Inyo County soon will begin screening applicants for three new scientific positions in the water department which will strengthen the county's effort in monitoring the Owens Valley environment. The positions are for a hydrologist and two associate researchers, one a soil monitoring specialist and the other a vegetation monitoring specialist.

Bill Hutchison, who was county hydrologist but now consults for the county from Sacramento, said it will be to the county's advantage to have a full-time hydrologist.

"Monitoring is the key (importance), being able to stay on top of the water level data and monitoring pumping activities (by the Los Angeles Department of Water and Power)," Hutchison said.

He said a hydrologist located in the valley would be able to handle analyses as needed, go into the field and provide independent verification of pumping and pumping data. Specifically, the hydrologist will be responsible for conducting

See Specialists, page 6

More wells turned off in Owens Valley

Results from midsummer monitoring by Inyo and Los Angeles have led the Inyo/Los Angeles Technical Group to turn off more wells in the Owens Valley.

Bob Wilson, LADWP engineer, said that of the 95 production and enhancement/mitigation (E/M) wells in the valley, 39 are still on. That means 56 wells are off, 30 of which have been turned off since the April 1, 1990 through March 31, 1991 groundwater pumping program went into effect.

For a description of the pumping program, see the June 30, 1990 issue of *Water Reporter*.

INTERVIEW: Attorney Antonio Cosby-Rossmann

Antonio Cosby-Rossmann, a San Francisco-based attorney, began practicing law in 1972 with an interest in environmental and land use cases. In 1976, just as he was setting up his own law practice, the Los Angeles Department of Water and Power was getting ready to publish its first environmental impact report on increased groundwater pumping in the Owens Valley.

Inyo County's district attorney, Buck Gibbons, prepared to challenge the adequacy of the EIR and, upon a recommendation, contacted Rossmann to help.

The county succeeded in convincing the Third District Court of Appeal that the EIR was legally inadequate, and thus began Rossmann's role in Inyo water

issues. In 1980, along with other consultants, he drafted the Inyo County Groundwater Ordinance, to regulate groundwater pumping, which the voters passed. However, in 1983 a trial court ruled the groundwater pumping regulation part of the ordinance unconstitutional. But by then the county had a water department, a result of the ordinance, with Greg James as its director.

While James has been the primary legal representative in water issues for the county ever since, Rossmann has continued to be a consultant to the county. Over the years, Rossmann's expertise in the case, and others similar to it in the West, has grown. As he puts it, he has "become a water lawyer because of this case."

In the following interview, Rossmann shares his thoughts on the proposed long-term water management agreement between Inyo County and Los Angeles.

Water Reporter: What do you think about the proposed long-term agreement?

Antonio Cosby-Rossmann: I think the agreement reflects careful deliberation on both sides. It does serve the primary purpose of being sensitive to and protecting the environment in the Owens Valley. It certainly creates a framework within which the parties can succeed in jointly managing the basin. So, from a legal point of view, I think the agreement is acceptable.

I am grateful to see that this year we have been challenged in the premise that the constraints will be reached, that this year we have found that the limits were reached and that pumping was in fact brought to a virtual halt through the mechanism that the agreement anticipates. So, from a legal

point of view I think the agreement is acceptable and I think from a political point of view we're seeing, at the present time, that it can work.

We have to keep in perspective the fact that even in our most successful days in court, 10 years ago -- 12 years ago, we never did, and in my view never could, have obtained an order from the court as favorable to Inyo County as that which we achieved with Los Angeles under the agreement: namely, the virtual cessation of groundwater pumping except for in-valley uses. To my mind, that demand by the county and its acceptance by Los Angeles is extremely significant and people must not lose sight of the fact that a court would probably not issue such a one-sided order.

The second point on the agreement that I think deserves consideration is more of a political than a legal nature. One has to be quite impressed by the appointments that are being made in Los Angeles to the Water and Power Commission and one has to be

impressed with the statements and policies that are coming out of the mayor's office. A comparison to Eastern Europe would not be inappropriate. It's as if the people whom we thought of (as being) on the other side really came around to recognize all along that our way made sense, and, you know, we should be welcoming that. We have to obviously be careful because, just as with Eastern Europe, we hardly know what the final answer's going to be and there's going to be some hard days ahead. But when people come around and essentially say, you were right all along on how the valley ought to be governed ... I think it would be tragic if developments in Inyo County now made it impossible for us to fully exploit the opportunity for cooperation.

Reporter: What do you think of some people's efforts to defeat the agreement? Would it set the county back?

Rossmann: Well, yes. I have to give a caveat here, you know, a sort of limitation, and that is, on the merits of the agreement, I feel very strongly that it is good. I also feel very strongly that what we're seeing may not be the final version.

I personally am looking forward with excitement to the release of the EIR and to the public comments it will generate. I think both the leadership in Los Angeles and in Inyo County have to recognize that it's not just the two parties that write the EIR, but now the public review begins and out of that public review will inevitably come changes in the EIR, and perhaps in the agreement, in the Green Book, and in the provisions for environmental protection, because there will be other eyes looking at it.

'Even in our most successful days in court, we never could have obtained an order from the court as favorable to Inyo County as that which we achieved with Los Angeles under the agreement.'

Antonio Cosby-Rossmann

Interview, from page 2

So, I'm not at all apprehensive or objecting to the fact that the public is now going to have a chance to look at the EIR and take shots at it. And let the merit of those shots be judged in the arena of public opinion. Some criticisms will be inevitably inaccurate and they'll be disregarded. Some criticisms will inevitably be meritorious and I'm sure the parties will find a way to accommodate those meritorious criticisms.

So, it doesn't bother me that people are concerned about the agreement. What would bother me, however, would be people who are categorically opposed to any agreement, no matter how favorable it was; people who feel that the courts inevitably would give us a better deal, or people who just would somehow find it personally or ideologically unacceptable to enter into any negotiations with the city of Los Angeles. I don't think history bears that out as a wise course, between nations, between cities and counties, or between neighbors.

And inevitably the political process includes opinions that are categorically opposed to everything and it's my hope, that in the public review process, those opinions will be isolated and judged on their own and not prevail.

Reporter: So you think that this is the best way to go about protecting the valley, an agreement?

Rossmann: Yes, an acceptable agreement and consensus with Los Angeles. As I say, the determination this year to virtually terminate groundwater pumping except for in-valley uses is a vivid example of the superior results you achieve by agreement.

You know, the other notion is, we can't always be at war with Los Angeles. Los Angeles is physically present in the Owens Valley, and if it's always going to be a situation where every decision they make or every decision we make is going to be subject to dispute, that's going to consume more energy than either party has, either party.

Keep in mind, if we were to just regulate directly with a groundwater ordinance, that they would be challenging everything we did just as we would challenge everything they did if they were not operating in cooperation with us.

Reporter: You mean if we went back to the Inyo County Groundwater Ordinance?

Rossmann: Right, and in my view, the Supreme Court of California would validate that ordinance. That's not the issue to me. I feel very strongly that the county has the authority to implement that ordinance.

But equally certain, Los Angeles has the prerogative to challenge in court virtually every decision that we would make under that ordinance. I just see that, in the end, as not as productive as working cooperatively with Los Angeles if the conditions are right.

Reporter: Are there any legislative alternatives that might serve as well as an agreement?

Rossmann: Well, the only legislative alternative I can think of at this point would be some form of state control and I think state control of groundwater is long overdue in places like the Central Valley. It would have been welcome in the Owens Valley, I think, and would have probably prevented some of the conflicts and some of the litigation that had to start in the Owens Valley going back to 1972.

At this point, however ... and for years, I remember when Buck Gibbons and I walked the halls urging the legislature to regulate and the answer that we got was, "That's just between you and Los Angeles. Don't expect us to get involved."

We kind of had to take that advice to heart and you know it's kind of like a long and perhaps difficult marriage, the two parties are really the only ones that can work it out and probably do so better than having something imposed by the outside, no matter how good faith or competent that outsider may be. So I think the parties have evolved to the point where, at this point state regulation in the Owens Valley is probably not necessary and might even be counterproductive.

That condition may change, of course, if a future administration in Los Angeles comes into office [and says], "It's ours and we're going to take as much of it as possible."

And then, if we're forced back into litigation, I would argue that statewide regulation would be a superior form than just having to rely on our own wits in the courtroom. But for the moment, I don't see a legislative solution as superior in the Owens Valley. But you know, five, 10, 20 years from now that condition may change.

Reporter: But with an agreement in place --

Rossmann: The legislature will be very happy to stay out of it.

Reporter: Is this a unique agreement? Is there any like it in the West?

Rossmann: Well, not really. We thought for awhile that the folks in Denver were going to -- you know, they had set up what they called a Metropolitan

Roundtable to bring together the competing interests from the western and eastern slopes of Colorado. And they had a very elegant process and I think a lot of good will was generated, but you see in the end it broke down. So, we may be kind of unique here.

But on the other hand, the Owens Valley and the nature of the ownership by Los Angeles of so much of Inyo County is also unique. But what's not unique or what I hope will not

'One has to be quite impressed by the appointments that are being made in Los Angeles to the Water and Power Commission and with the statements and policies coming out of the mayor's office.'

Antonio Cosby-Rossmann

See Rossmann, page 4

Rossmann, from page 3

prove unique is if these historical adversaries can work it out, that should give promise to others in the West that it can happen. What we're looking at right now in Las Vegas -- Las Vegas taking the water from central Nevada -- is very much a replay of Los Angeles in the '60s and early '70s saying, "Well, the water's there, we're going to take it."

And, frankly, we may have to go through some litigation on that to bring Las Vegas around to the point of view where they will see that cooperation counts. But, I guess if we succeed with cooperation, then that gives the decision makers in Nevada something to point to Las Vegas and say, "Don't be so greedy, work out an accommodation with your neighbors."

On the other hand, if we don't succeed, then I think it is going to mean that in the West we're going to be looking at litigation for the next generation to continue to resolve a lot of these disputes and, in turn that's going to depend on the resolve and competence of the judiciary and that's a big task.

Reporter: It seems as if it will always end up in negotiation. Is that right?

Rossmann: Yes, ultimately you have to sit down and negotiate and that's where we are. And whether that example will be followed in Las Vegas or elsewhere in the West ... it'd be nice to see that happen. I think we cannot negotiate with Los Angeles or reach an agreement with them just because we want to set a nice precedent, we deal within our self interest. But I think that that self interest does afford an example of how other Western disputes should also be resolved.

Reporter: So, the Las Vegas situation helps place our situation in perspective.

Rossmann: Yes, although Las Vegas has no alternative sources and they're also very much into a growth mode. And it is scary. It is scary. But what would happen in Las Vegas is what happened in Los Angeles. Despite the water engineers' desire to get more and grow more, the people who live there are not so sure they want that much more growth and, guess what? They turn out to be your strongest allies. Certainly over the years, Inyo County and Mono Lake have had some of their strongest alliances from the folks who live in Los Angeles and from the legislators elected from Los Angeles. So, there's a mutual interest in LA -- as it's pointed out, every drop of water that's saved in Inyo and Mono counties is one drop of water less to go through the sewage pipes to the Santa Monica Bay. We all share this interest and I think that's how it will develop in other parts of the West, as well.

Reporter: Do you see any pitfalls in the proposed agreement Inyo County has with Los Angeles?

Rossmann: Well, the one concern I have is, whether and how accurately we can predict environmental damage and prevent it before it becomes irreversible. That is to say, the mechanism of moisture measurements and other criteria that are used are saved by the notion that if there is any observed environmental damage regardless of the measurements, that keeps the restrictions [on pumping].

I think we do have to be sensitive to the fact that we are relying on a scientific technique that has to be tested in reality. On the other hand, as a scientific matter, that was the trouble with the court of appeal's restrictions. They were too simplistic, they were just numbers. And they were too generous to Los Angeles in times of drought, and they were too restrictive to Los Angeles in times of plenty. If there's ample water available and you take it out of the ground and put it on the surface, you can leave the valley's environment better off with some of the enhancement/mitigation that we're seeing.

I guess I still have faith in the scientific method and I think we've got to validate the method in this case. And yes, I am concerned that the validation may not prove perfect, and that we have backup mechanisms to deal with that.

Question/Answer

Question: Why is the Green Book important?

Answer: The proposed long-term water management agreement between Inyo County and Los Angeles outlines goals, policies and provisions and, if approved, will become a legal document changeable only through court procedures.

But while the proposed agreement says water resources will be managed to avoid significantly affecting the Owens Valley environment, it does not say how, specifically, this is to be done.

That is why the Green Book is important. The Green Book is a technical supplement to the proposed agreement which details hydrological, vegetation and environmental research, testing and protocol necessary for implementing the goals of the agreement.

For example, the agreement says the valley's various vegetation communities will be monitored regularly and that water resources will be managed accordingly. That is, wells will be shut off in one management area if that area's monitoring site indicates groundwater pumping has affected or might affect the vegetation.

The agreement provides the legal basis for monitoring and for taking action if necessary. The Green Book tells Inyo County and Los Angeles how to actually perform the monitoring and what action to take in response to monitoring results.

Perhaps the greatest value of the Green Book is that not only does it provide current and future water managers and scientists with the procedures for carrying out the proposed agreement (thus maintaining continuity), but it has a certain flexibility that the proposed agreement, if approved, would not have.

Because it is a scientific document, the Green Book can change as further research and scientific techniques dictate. That flexibility will enable Inyo County and Los Angeles to carry out the agreement as effectively as possible.

Draft EIR, from page 1

traction from the Owens Valley. Also, this chapter describes development of the Owens Valley to 1960. Finally, it discusses litigation associated with groundwater pumping, the first and second EIRs Los Angeles wrote, Inyo County's groundwater pumping ordinance, the interim five-year agreement and cooperative studies, and the proposed groundwater management agreement of August 1, 1989.

Water Supply for Los Angeles

This chapter describes historic and projected water use in Los Angeles and the sources of the city's water supply. It includes sections on water conservation and water reclamation in Los Angeles.

Water Management in the Owens Valley

This chapter describes water management practices in the Owens Valley prior to operation of the second aqueduct in 1970 and from 1970 through 1990.

Proposed Project

This chapter describes the proposed project, including the agreement, and summarizes the elements and procedures of the project. It also discusses elements, such as the lower Owens River project and the salt cedar control program, that will be subject to future CEQA review.

Alternatives to the Proposed Project

This chapter discusses alternatives to the proposed project, including alternative water supply sources for Los Angeles and alternative water management strategies in the Owens Valley. It also identifies water management practices which Los Angeles may implement if there is no long-term agreement on a groundwater management plan.

Environmental Impact Assessment Method and Summary of Impacts and Mitigation Measures

This chapter describes the organization and method of analysis in the resource-specific chapters that follow. It also summarizes in table form environmental impacts resulting from the proposed project and corresponding mitigation measures.

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If you have comments on the newsletter or would like to be put on the mailing list, send your name and address to: Inyo County Water Department, Attn.: Heidi Walters, 163 May St., Bishop, Calif. 93514. You also may call us at 619-872-1168.

The next eight chapters discuss specific environmental issues of concern under these headings: Geology, Soils and Seismicity; Water Resources; Vegetation; Wildlife; Air Quality; Energy; Land Use and Economic Development; and Cultural Resources.

Each of these chapters describes in detail environmental settings, and impacts of the proposed project. Mitigation measures are identified for each significant impact as appropriate.

Ancillary Facilities

This chapter describes certain new facilities and practices that will be constructed and implemented as part of the proposed project, including 15 new wells, the expansion of groundwater recharge facilities in the Laws and Big Pine areas, and the increase of groundwater extraction on the Bishop Cone. It also identifies the potential impacts of these facilities and practices and appropriate mitigation measures.

CEQA Considerations

This chapter provides CEQA-required discussions regarding the relationship between short-term uses of the environment and the maintenance of long-term productivity, potentially irreversible effects, growth inducement, cumulative impacts, and areas of controversy related to the project.

Eastern Sierra**Inyo awaits court decision on suit against DOE**

Representatives for Inyo County presented oral arguments Aug. 16 to the Ninth Circuit Court of Appeal in the case involving the U.S. Department of Energy's refusal to designate Inyo County an affected unit of local government. The county seeks the designation in regard to the nation's first high-level nuclear waste repository proposed to be located at Yucca Mountain in Nye County, Nevada.

Inyo County, which shares nearly 100 miles of common border with Nye County and is 14 miles from Yucca Mountain, has been trying to gain the designation since August 1988. It would allow Inyo to comment on the waste site project and participate in the site characterization study. The county says the potential for radionuclides escaping a waste repository at Yucca Mountain, and perhaps entering the aquifer, places southern Inyo's water, air and people in danger.

The DOE has said there is no danger to Inyo County.

In August 1989, Inyo County sued the DOE over its decision to not grant Inyo affected status. Esmeralda County, in Nevada, also sued the DOE for the same reason and presented arguments along with Inyo at this month's hearing.

The court took the case under submission and said it would send a written decision to Inyo and Esmeralda six weeks from the date of the hearing.

Specialists, from page 1

studies of water resources in Inyo County, and monitoring groundwater levels and aqueduct operations.

The soil monitoring specialist will lead and test the vegetation and soil water monitoring program designed to protect the Owens Valley environment from the effects of groundwater pumping by the LADWP.

The vegetation monitoring specialist will direct projects in vegetation management in the valley, such as revegetation of disturbed areas, controlling weedy plants, and measuring and evaluating plant populations.

David Groeneveld, plant ecologist for the county, said these two people will be crucial in continuing the research that has been going on for several years.

"These people will be very important because we've done a lot of testing to put together a monitoring program but there are still a lot of questions to be answered," Groeneveld said. "We have a program that is groundbreaking, nobody's ever tried to protect vegetation from groundwater pumping before. It's extremely important to bring in the new scientists now because we're in the fourth year of a drought. Now is the time for an aggressive research program, when the valley's vegetation is under the most stress. We must continue to improve our knowledge through further research."

"Further research" is listed and described in Chapter 5 of the Green Book, the technical appendix to the long-term water management agreement between Inyo and Los Angeles.

The county hopes to have these three new positions functioning by the beginning of next year, following October interviews and a selection process.

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